EXHIBIT B

Children's Health Defense's Articles and Fact-Checker Opposition Articles

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Merck (June 9, 2019)

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MAY 15, 2019

RFK, Jr.: Gardasil "The Science" Video and Other Facts

Robert F. Kennedy, Jr.—*"Many of the things I'm going to say today would be slanderous if they weren't true. And, if they are not true, then Merck should sue me. But Merck won't do that. And they won't do that because in the United States, truth is an absolute defense against slander."*

This must-watch video details the many problems with the development and safety of Merck's third-highest grossing product, Gardasil. Children's Health Defense (CHD) and Robert F. Kennedy, Jr., CHD's Chairman and Chief Legal Counsel, ask that you watch and share this video so that you, and others, may make an informed decision of whether or not

to give your child, boy or girl, a Gardasil vaccine. It can also be a useful tool for pediatricians who are trying to understand how this vaccine, that is actually causing health problems with young people, could have been approved by FDA and then recommended by CDC. The video is full of jaw-dropping facts about Gardasil and the clinical trials leading up to its release upon an unsuspecting public.

- **Court Hears Gardasil Science and Moves Forward**
- **25 Reasons to Avoid the Gardasil Vaccine**
- **Related Peer-Reviewed, Published Gardasil Research From the CHD Science Library**
- **Related Gardasil Articles on the Children's Health Defense Website**

Transcript of "The Science" presentation:

Download "The Science" Transcript

Children's Health Defense and Robert F. Kennedy Jr.—Science Day Presentation for Gardasil

Hi, I'm Robert F. Kennedy, Jr. and I'm making this video for the sake of parents who are trying to make an informed decision of whether or not to give their child, their boy or girl the Gardasil vaccine.

I'm also making this video as a tool for pediatricians who are trying to understand how this vaccine—if it's actually causing all of these problems with young girls—could have been approved by FDA and then mandated by CDC.

Virtually all of the things that I'm going to talk about in this video are available to the public on public documents as I'm going to show.

Finally, I want to say this about Merck which is the company that makes the Gardasil vaccine.

Many of the things that I'm going to say today would be slanderous if they were not true. And if they're not true then Merck should sue me. But Merck won't do that and they won't do it because in the United States truth is an absolute defense to slander. And second of all Merck knows that if they sue me, I'm going to immediately file a discovery request, and many, many, more documents are going to emerge that illustrate even more fraud by this company on the American public and the people all over the world.

Finally, as a footnote I'm not going to talk today about the specific biological mechanisms that allow this vaccine to cause harm in human beings. That information is out there it's in dozens of peer-reviewed, published scientific documents. Many of these are described on

our website and I urge people to go to the Children's Health Defense website to educate themselves on those issues.

Today we're going to talk about the clinical trial about Merck's fraud in that process…and this is Merck's claim:

The HPV vaccine will "eliminate cervical cancers and other HPV associated cancers."

The danger of dying from HPV cancer in this country is 1 death in 43.5 thousand people.

Imagine you have a deck of cards but instead of 50 cards. There's 43,500 on a on a big, big table and one of those cards is a black card. If you get that, you die.

So, Merck's deal is that it's going to remove that black card from the deck. But in order to play the game and make sure that Merck removes the black card, everybody who participates has to put in $420 because that's the cost of the three-dose Gardasil vaccine.

So, here's Gardasil by the numbers. So, the cost of the three-jab series average is about $420. There are 76 million children who essentially have been mandated by CDC to receive these vaccines. A blockbuster product from Merck, and global revenues from this vaccine today are about $2.3 billion dollars. It's the third largest product in the company's inventory.

The cost of saving one American life is 18.3 million dollars. People could argue whether or not that's a reasonable value of a human life. What I would say was is that the criteria that we should use for evaluating reasonableness—is there a cheaper way to save more lives? And people would argue that Pap smears are the most effective way that 80 percent of cervical cancer deaths have already been eliminated by Pap smears. And this is the most effective technology.

Incidentally in another context HHS has already put a value on human life and the value is $250k. That is the maximum number that the vaccine compensation program will pay for killing an American citizen.

Prior to marketing the vaccine, the FDA licenses the vaccine, and in that licensing process Merck had to show that the vaccine was safe. According to Federal regulations the word "safety" means "relative freedom from harmful effects, taking into consideration the character of the product in relationship to the condition of the recipient at that time."

So, what is the condition of the recipients of that target group for this vaccine. And this vaccine targets millions of preteens and teens, for whom the risk of dying from cervical cancer is practically zero. Cervical cancer's median age of death is 58. It is first diagnosed at age 50 (median).

A teenage girl or boy has zero chance of dying of this illness. Which means the threshold for giving this medication is very, very high.

Secondly it is mandated in some jurisdictions So the government is actually—government officials are actually—coming in and ordering people to take this medical intervention. So, we have to be sure that the threshold for risk, "the risk profile" for that medical intervention should be very, very low.

Third, unlike other medical interventions Gardasil recipients are perfectly healthy. So, when you give medication to a healthy individual you have to make sure that the risk profile is practically zero. And in order to determine risk, there is a standardized protocol. And it's called double-blind placebo studies. What does that mean?

It means that the drug company that's trying to license this product gives the medication to one group of people, maybe 5,000 or 10,000 people, and gives a placebo, an inert placebo, either an identical looking pill that is inert—it's either saline or sugar—to a similarly situated group of 5,000 or 10,000 people and it's double blind meaning that neither the patients nor the researchers knew who got the placebo and who got the actual medication.

And you can see here, here's what the NIH says about the National Institute for Health placebos: an inactive substance that looks like a drug.

So here are typical examples:

Lipitor was given during its study phase to about 17k subjects. Half of them received Lipitor half of them received a sugar pill that looked identical to Lipitor and they were observed and studied for up to 3.3 years.

Why for so long? Because many of the injuries that are caused by medication are latent—they don't show up for two or three or four or five years cancer for example may not show up for four or five years after the exposure. Autoimmune diseases and allergies and these kind of things take a long time to diagnose. Enbrel for that reason was delayed for 6.6 years and against a control group that received a saline injection.

Botox, there was a national emergency to get Botox to market so people could get their wrinkles cured, was studied for 51 weeks and it was studied against a saline injection.

Now I'm going to show you one of the really outrageous frauds that Merck committed during the clinical trials. This is an insert that is part of every vaccine package. And you can go on the Internet right now and look up that Merck product and search and find these two tables.

In the initial table you can see a there are three columns and this is a table that just looks at injuries at the vaccine site for redness and itching and bruising and pain at the vaccine site and they use one…there were 5,000 girls—5,088 girls who got the Gardasil vaccine.

Number two, there were 3,470 girls who got the AAHS control, what is that? That is the adjuvant in the vaccine. That is a toxic neurotoxin, that's put in the vaccine to make it more long-lasting to provoke an immune response in the subject of the vaccine.

And most people believe that it is that aluminum adjuvant that is causing all of these injuries in the girls who are getting the vaccine. And there were 3,470 people who received just the neurotoxin with no antigens and no other vaccine components.

And you have a third group which is the placebo group. What I want you to look at is at these numbers. That in the Gardasil and AAHS control there is virtually the same number of injuries.

And when you get to the saline placebo, that injury rate is cut in half.

Now let's go to the table where they talk about real systemic injuries…autoimmune diseases, and instead of showing us real science, which is to show us what happened to the saline group, they hide the saline group as a way of fooling you, your pediatrician and the regulatory agency by compressing it into the aluminum group and they never tell us. They say this is a combination of the aluminum adjuvant and the saline placebo. They don't tell us how many in each category were compressed there. The real thing that you need to watch here is what happened.

These are all very, very serious injuries. These are injuries that in some cases people would feel were worse than death—and that affect people and debilitate for a lifetime in many cases.

And if you look at the bottom of the Gardasil group an astonishing 2.3 percent of the girls in the clinical study who received the Gardasil vaccine got ill from autoimmune diseases, many within seven months of taking the vaccine.

And look what happened in the aluminum group—the same number exactly. 2.3 percent.

Nobody, no parent would allow their daughter to take a substance that had a one-in-40 chance of giving them a lifetime disability.

World Health Organization says that using a spiked placebo, or a faux-cebo as Merck did with Gardasil, puts you at a methodological disadvantage that "it may be difficult or impossible to assess vaccine safety."

Dr. Stanley Plotkin, who developed the polio vaccine…who developed the pertussis vaccine, who developed the rotavirus vaccine—the Stanley Plotkin award is the Nobel Prize of vaccinology it's given to the top vaccinologist every year—and what he says is:

Unless you have a true control group you are in LA LA LAND.

Finally, the American Medical Association says the absence of double-blind placebo testing and short-term studies of chronic disease are "the indicia of marketing masquerading as science."

And that's what Merck gave us.

The Cochrane Collaboration—thirty thousand scientists from all over the world who came together to create an independent assessment of medical protocols which they saw as being increasingly controlled by the industry—The Cochrane Collaboration said the use of active comparators probably increased the occurrence of harms and the comparative group thereby masking harms created by the HPV vaccine.

And that indeed was Merck's point…to hide those harms.

So, if you do the math women are 100 times more likely to suffer serious adverse events from the Gardasil vaccine than they are to be protected from cervical cancer.

So now we have a very different bargain in this card game that we're playing with Merck.

If 43 thousand cards and the black card—the death card is gone—but now, there are a thousand blue cards which if you pick one of those by mistake you have a good chance of getting an autoimmune disease. Nobody would take that bargain.

So, in order to get the FDA license to market this vaccine Merck did a number of studies, which are called protocols. We don't know how many they did because they're not telling us they never disclosed it.

The one we're most concerned with is protocol 18. The reason protocol 18 is critical is because that was the basis for FDA giving Merck the license to produce and market the vaccine.

Why is that? Because protocol 18 is the only one in which the target audience for this vaccine. 11- and 12-year old girls was actually tested, and had a control group. The other ones looked at big cohorts of women were 16 to 25-year old and 16 to 26-year old women.

Protocol 18 looked at girls and boys from ages 9 to 15. It was a total of 1200 children. and almost 600 controls. That is a very, very, tiny group of people to study in order to determine the safety of a product is going to be marketed to billions of children around the world.

Now I'm going to show you one of the key fraudulent flimflams that Merck used to get this license. FDA said they approved Gardasil based on protocol 18 because protocol 18 was of particular interest because it's the only protocol in which Merck used a true saline placebo instead of the aluminum adjuvant as a control.

That's what Merck told FDA and the CDC but Merck was lying. It actually did not use a true saline placebo. It used what Merck called the "carrier solution." Which is all of the components of the vaccine except for the aluminum and the viral particles the antigen.

Among the compounds that we know were in the carrier solution are Polysorbate 80 which we have no idea what the safety profile is because it's never been tested for safety independently in vaccines. Sodium borate which is borax which is banned by FDA in food products and all food products in the United States, and is banned altogether in Europe, genetically modified yeast, (there's no safety test ever been done on it in vaccines) L-histidine, the same, and possibly DNA fragments.

I say possibly because we know there are DNA fragments in the final vaccine, we don't know how they got there. And Merck has lied about the DNA fragments from the outset.

And despite these potentially toxic components of compounds that are in the vaccine, the 596 children that were given the carrier solution fared much better in the other than any other cohort in the study. The girls and boys who receive the carrier solution were the only significant cohorts with no serious adverse events for the first 15 days.

And here's another one of the gravamen of the fraud that Merck committed in its Gardasil trials, but it turns out in the protocol 18 study, it appears Merck cut the amount of aluminum that was given to the vaccine group in half. They tested a completely different formulation. If true, we theorize that they took the aluminum out to reduce the number of injuries and to mask the really bad safety profile of this vaccine.

And since the protocol 18 data are not based on the Gardasil vaccine formulation, the trial itself constitutes rank scientific fraud.

Here's another bag of tricks that was used by Merck in order to skew the clinical trials results in favor of Gardasil.

Merck and its researchers use what they call exclusion criteria—for example people who had zero allergies, people who had prior genital infections were thrown out of the clinical trials. People who had over four sex partners in their entire lives were excluded from the trials. Anybody who had a history of immunological or nervous system disorders, people with chronic illnesses and seizure disorders, people with other medical conditions, people who had reactions to vaccine ingredients including the aluminum, yeast and the benzonase. or anybody with a history of alcohol and drug abuse.

If you really wanted to know whether the vaccine was helping people—if it was effective—wouldn't you want those people in your study wouldn't you want people who had a genetic vulnerability to cancer in your study to see if it actually was capable of preventing cancer.

Then Merck had one catch all exclusion category which was any condition which in the opinion of the investigator might interfere with the evaluation of the study objectives. Well, that gave Merck and its paid investigators complete control to throw people out of the study who they thought might make the study look not successful. All of these exclusionary categories gave Merck the ability to limit the study to people who were like All of these exclusionary categories gave Merck the ability to limit this study to people who were like an elite club of superheroes…the people who get the vaccine are not the same people they tested on. They tested it on the Avengers. They didn't test it on, you know, Joe Bag-of-Donuts … the people are actually receiving this vaccine in day to day life. And by doing that they were able to mask whatever injury might show up in a larger and more vulnerable population who are actually receiving the vaccine.

Experts used an arsenal of sloppy protocols to again, hide vaccine injuries. Among these, Merck gave report cards—the daily journal report cards— only to 10 percent of the people who they tested the vaccine on and told those people only make reports for 14 days after the injection. And the report cards were only designed to collect jab site information. So, redness, itching, bruising, fever.

And they ignored altogether the autoimmune diseases and menstrual cycle problems and fertility problems and pain and dizziness and seizures and all of the other things that we've now seen are associated with the vaccine. **In fact, there are numerous girls who report that they were injured that they attempted to report those injuries to Merck, and that Merck rebuffed them.**

Furthermore, Merck gave extraordinary discretion to its researchers to determine what was a vaccine injury in what was not a vaccine injury and because there was no inert placebo, it was completely within their discretion. If a girl came back with seizures or autoimmune disease or menstrual cycle problems they could just say to the girl, well that's not related to the vaccine.

In some cases, we know that Merck actively covered up and lied about injuries that it had a duty to report to the Vaccine Adverse Event Reporting System. For example, in the case of Christina Tarsell, a Maryland girl, who died from the Gardasil vaccine, Merck lied about that death in its official reports of the Vaccine Adverse Event Reporting System. It told the system that Christina's doctor had told Merck that her death was the result of a virus.

And the doctor adamantly denies that. Merck has refused to remove the misinformation from the VAERS system.

Furthermore, Merck lied to the girls who participated in these studies, telling them No.1, that the placebo was saline and that it contained no other ingredients. And No. 2, that the study in which they were participating was not a safety study. They were told that there had already been safety studies and that the vaccine had been proven safe.

What did this do for Merck? It made it so the girls were less likely to report injuries associated with the vaccine. Because they believed that the vaccine that they were receiving had already been proven safe and that any injuries they did experience maybe a month or two months or three months after the vaccine must be simply coincidental and had nothing to do with the vaccine.

Despite all of these efforts by Merck to discourage those from reporting vaccine injuries during the clinical trials, half of the girls in the Gardasil group and half of them in the aluminum adjuvant group reported serious injuries after receiving the vaccine.

In order to conceal the link between these injuries and the vaccine, Merck invented a brand new medical metric that had never been heard of before called “new medical conditions” and it dismissed all of these new injuries which affected 50 percent of the girls who received the vaccine and the adjuvant as “new medical conditions”, unrelated to the vaccines, simply sad coincidences.

Many of these diseases were serious diseases—blood lymphatic diseases, anemia, endocrine diseases, autoimmune diseases, G.I., Crohn’s disease, ulcerative colitis, vaginal infections musculoskeletal injuries, arthritis, neoplasm, Hodgkin’s disease, neurological diseases, psychiatric diseases, depression, reproductive and breast disorders, menstrual irregularities, and pain. Over 3 percent of the girls—1 in 30—in both groups required surgical and medical procedures.

So, this card game that we’re playing with Merck has now become a really bad bet.

Merck has removed the one black card but you now have a 1 in 40 chance of drawing a blue card and getting an autoimmune disease that may afflict you for the rest of your life and you have a 1 in 2 chance of having some other serious medical condition.

So now let’s look at Merck’s central claim which is that the Gardasil vaccine will prevent cervical cancer.

Merck’s in a sweet position here, let’s face it because the target group vaccine is 11-year olds, and the median age of death for cervical cancer is age 58. Merck essentially is making this bargain.

It's telling the 11-year old girl if you take our vaccine 47 years from now you won't die of cervical cancer. And of course, that truth is you can't make a vaccine that proves that it's going to prevent cancer 47 years from now. There's no way to test for that.

So, Merck used a shortcut. It said we're going to prove that it prevents these what it called surrogate end points. The best thing that Merck had come up with was CIN2 and CIN3 lesions which it called precancerous lesions even though most of those lesions never mature into cancer.

So how can you call something precancerous when it was never going to turn into cancer?

And here's what a study published in the American Journal of Epidemiology said about Merck's scheme: CIN3 is an imperfect diagnosis of precancer, and an intermediate surrogate for cancer.

Their own attorneys told them for these products, the indication is the surrogate, not the ultimate. Promotion cannot make any claim, vis-a-vis the ultimate end point, based upon the fate of a surrogate endpoint.

Merck has another problem. **Recent peer reviewed scientific studies indicate that perhaps only a third of cervical cancer cases are even associated with the HPV vaccine.** That would completely put the lie to Merck's claims that Gardasil is going to eliminate cervical cancer altogether.

So now we have a really dubious deal because we need to put that black card back in the deck because now, we have doubts about whether or not this vaccine can prevent cervical cancer at all.

But the news gets worse. Gardasil may actually cause cancer. Gardasil's insert states Gardasil has never been evaluated for potential to cause carcinogenicity or genotoxicity. And Gardasil's ingredients include possible carcinogens including human DNA.

And look at this…This is Merck's own pre-clinical trial records and those records show that girls or women, who already had HPV—had been exposed at some point in their life to it—actually had a negative efficacy of 44.6 percent.

What is negative efficacy? It means those girls had a 44.6 increased risk of getting those precancerous lesions. To make things even worse, there are recent scientific studies that suggest a phenomena of what is known as type replacement—some 200 different strands of HPV, some of them are more cancerous than others, and the current HPV vaccine goes after 9 of those 200 viral types. What these studies indicate is by eliminating those particular strains of the virus it opens up an ecological niche in the woman so that more lethal and

virulent viruses can actually colonize that spot and dramatically increase the risk of cervical cancer.

So now Merck's deal is looking really grim. Not only do we have a one-in-40 chance of getting an autoimmune disease and a 50 percent chance of getting some serious medical condition but now the cancer risk has been reinserted and actually amplified.

And now let's look at some of the non-cancer injuries that Merck found in its preclinical studies.

The miscarriage rate in the preclinical studies after Gardasil doubled the background rate. The birth defects in the Gardasil group were five times the rate of birth defects from the control group. As to reproductive disorders an astonishing 10.9 percent of the women in the pool group reported reproductive disorders within seven months of receiving Gardasil compared to 1.2 percent in the placebo group. The death rate in the Gardasil group and the clinical trials was 8.5 per 10 thousand.

Death risk from this vaccine according to Merck's own studies is 37 times the risk of dying from cervical cancer.

Oh, now look at the deal that Merck has offered us they've actually increased our risk of dying by 37 times.

So now let's look at post-licensing surveillance. So, Merck can argue that we might have missed something in our pre-licensing studies but surely if there were any injuries being caused by this vaccine we would see them in post-licensing surveillance.

And the problem with that is that the post-licensing surveillance system, the principle one, is called the Vaccine Adverse Event Reporting System. The system is a voluntary system that simply does not work. It's broken. In fact, in 2010 HHS hired another federal agency the agency for healthcare research quality and a group of Harvard researchers to study Vaccine Adverse Event Reporting System and those researchers found fewer than 1 percent of adverse events of vaccines are ever reported.

But even under that system, Gardasil has distinguished itself as the most dangerous vaccine ever invented.

In fact, when you compare it to Menactra which is a meningitis vaccine that's given to the same age group—teenagers—Gardasil had an 8.5 times more emergency room visits, 12.5 times more hospitalizations, 10 times more life-threatening events and 26.5 times more disabilities than Menactra.

The vaccine court which is within HHS has made awards for numerous deaths and very, very serious injuries from the Gardasil vaccine. So, HHS itself admits that this vaccine kills people and it's given compensation to the families that were injured.

The same wave of serious injuries and deaths that have been seen in nations around the globe, when they adopt mandates for the Gardasil vaccine. Even Gardasil's own insert, the package insert that the company provides, acknowledges that the injuries that can be caused by this vaccine include death, pancreatitis, fatigue, malaise, immune system disorders, autoimmune diseases, anaphylaxis, musculoskeletal and connective tissue disorders, nervous system disorders, acute disseminated encephalomyelitis, that's brain injuries, Guillain-Barré syndrome, and other neuron diseases, paralysis, seizures, Transverse myelitis, and vascular disorders.

In Australia, in 2015, the Australian Department of Health Therapeutic Goods Administration reported that the adverse rates in girls is 17 times the incidental rate for cervical cancer throughout their lifespan. The country only looked at a handful of conditions including demyelinating disorders, complex regional pain syndrome and premature ovarian failure. There are many, many other injuries that included hospitalizations that were not subject to that study.

India suspended its Gardasil trials after numerous deaths and serious injuries.

A south Asian Journal of Cancer found that "a healthy 16-year old is at zero immediate risk of dying from cervical cancer but is faced with a small, but real risk of death or serious disability from a vaccine that has yet to prevent a single case of cervical cancer."

Japan de-recommended Gardasil three months after it had added the vaccine to the immunization schedule. Japan's health ministry discovered adverse events reported after Gardasil's approval were many times higher than other vaccines on the recommended schedule—these included seizures severe headaches partial paralysis complex regional pain syndrome and an undeniable causal relationship between persistent pain and the vaccination.

Japanese researchers found that the adverse event rate for the HPV vaccine was as high as nine percent and that pregnant women injected with the vaccine aborted or miscarried 30 percent of their babies.

In 2015 the Japanese Association for Medical Sciences issued official guidelines for managing symptoms of injuries caused by the Gardasil vaccine and the association announced there was no proof that this vaccine even prevents cervical cancer.

Alarmingly Merck's own studies indicate that the Gardasil vaccine may disproportionately impact Asian women. For example, in protocol 19 there were 8 deaths among 3800 women

and 7 those were Asians. That was 87 percent for Asian women, while only 31 percent of study participants were Asian.

Denmark in 2015 announced the opening of five new HPV clinics to treat women who were injured by the Gardasil vaccine. The day that they announced that opening there were 1300 applicants for treatment in those clinics.

In Colombia in 2014 800 girls in the town Carmen de Bolivar were grievously injured by Gardasil vaccine. Protests erupted all over Columbia. The attorney general of Colombia ordered the National Health Service of that country to immediately begin treating girls who were injured by the Gardasil vaccine and 2017 Colombia's highest Constitutional Court ruled that the HPV vaccine would no longer be considered mandatory in Colombia and ordered that girls who showed symptoms after receiving the vaccine be given appropriate medical care.

Pompilio Martinez, who now teaches at the National University of Colombia, described the HPV vaccine as "a crime against humanity."

Recent studies have shown that in nations with robust HPV vaccination programs and heavily vaccinated populations—in the UK and Sweden and Australia—were actually seeing dramatic upticks rises in the rate of cervical cancer rather than the downtrends that Merck promised everybody.

Now I'm going to show you some of the reasons why your pediatrician is insisting despite all of this evidence that your daughter or son gets the HPV vaccine. And the reason is the pediatrician is getting his information from agencies that have compromised through financial entanglements with Merck.

This is what the FDA is telling the public about vaccine safety: it says that vaccines are regulated by FDA and undergo a rigorous review of laboratory and clinical data to ensure the safety efficacy and purity and potency of these products.

But this is a very different story the FDA is acknowledging in-house, (and this comes from a 2007 document—this is the year that Gardasil got its license from the FDA), FDA's inability to keep up with scientific advances mean that American lives are at risk. FDA is evaluations and methods have remained largely unchanged over the last half century. The world looks to FDA as a leader today. Not only can the agency not lead, it cannot even keep up with the advances in science.

But, the most troubling problem at FDA is it has nothing to do with incompetence. It has to do with corruption. The panel within FDA that licenses new vaccines and anoints them as safe is called the Vaccine and Related Biological Products Advisory Committee, the

acronym is VRBPAC. And in 2000 Congress investigated VRBPAC because of charges of corruption from outside the agency.

And here's what the congressional committee found: the overwhelming majority of members, both voting members and consultants have substantial ties to the pharmaceutical industry.

Conflicts of interest rules employed by FDA have been weak enforcement has been lax. Committee members with substantial ties to pharmaceutical companies are given waivers to participate in committee proceedings. In many cases significant conflicts of interest are deemed to be in conflict at all.

And here are some specific examples of the conflict of the advisory committee that approves vaccines:

- Three out of five FDA advisory committee members who voted to approve the rotavirus vaccine in December of 1997 had financial ties to the pharmaceutical companies that were developing different versions of the vaccine.
- One of the five voting members had a 9 plus million dollar contract for a rotavirus vaccine.
- One of the five voting members was the principal investigator for a Merck grant to develop the rotavirus vaccine.
- One of the five voting members received approximately a million dollars from vaccine manufacturers toward vaccine development.

Once they get by FDA, vaccine companies then go to CDC, where another committee, which is called ACIP Advisory Committee on Immunization Practices, will then take that vaccine that FDA has licensed and they will put it on the recommended list which means it becomes essentially mandatory for 76 million American children.

A listing on CDC's recommended list is the holy grail for vaccine companies. It means a bonanza of wealth for those companies. If ACIP votes to add your vaccine to the recommended list, it means:

- mandating the vaccine to millions of American children, (half of those are paid for by the government);
- Immunity from liability for the manufacturers so nobody can sue them no matter how dangerous that vaccine is, no matter how toxic its components no matter how grievous your injury, you cannot sue that vaccine manufacturer for damages liability;
- Inclusion of the Vaccine for Children's program which is a program that guarantees that half the vaccines that you manufacturer are going to be purchased by the CDC at full cost.

This means billions of dollars for companies that are fortunate enough to get their vaccines listed on this recommended list. **It means that you're going to sell 74 million vaccines to people who have no choice—you have no marketing cost you have no advertising cost, you have limited testing expenses, and you have no liability for injuries caused by your vaccine.**

In 2006 and 2007 while Gardasil was getting its approvals, ACIP did not pretend to base its recommendations on scientific evidence. It only adopted evidence-based standards in 2011.

But what did it base its recommendation on? It turns out it was mainly just friendships and money. The conflicts at ACIP are as bad as the conflicts within the FDA.

This is from the same year—2000— investigation by Congress quote the CDC grants blanket waivers to ACIP members each year that allow them to deliberate on any subject regardless of their conflicts for the entire year. ACIP members are allowed to vote on vaccine recommendations even when they have financial ties to the drug companies related to similar vaccines.

The ACIP's prolific use of working groups to track vaccine policy is outside the specter of public scrutiny, opens the door to special interest access. ACIP's policy of allowing government employees to vote encourage the system where government officials make crucial decisions affecting American children without advice or consent of the governed.

Here is a typical committee panel that approved Merck's rotavirus vaccine. The majority of ACIP's members were conflicted and their most recent vote. Again, this is Congress's words not mine.

- The chairman served on Merck's immunization Advisory Committee the same committee that approved Merck's vaccine.
- Another member who shares the patent on a vaccine underdeveloped for this same disease at $350,000 grant from Merck to develop this vaccine and was a consultant from Merck.
- Another member was under contract with the Merck Vaccine Division.
- Another member received salary from Merck and other payments.
- Merck another member was participating in vaccine studies with Merck.
- And another member received grants from Merck.

And unfortunately, that congressional investigation had virtually no impact on the way CDC does and continues to do business. For example, **a 2009 report by the inspector general of HHS on the same conditions existed at CDC had systematic lack of oversight. Ninety seven percent of committee members' conflict disclosures had omissions. 58 percent had at least one unidentified potential conflict. 32 percent of the committee members had at least one conflict remained unresolved and the CDC continues to grant waivers.**

This shows that CDC is really just an arm of the vaccine industry it shouldn't be regulating the industry. It's part of it.

This is CDC's entire budget $11.5 billion, and almost half of that almost 5 billion dollars goes to purchasing and promoting vaccines. And this little sliver here is the Immunization Safety Office.

That's how much money, less than 1 percent of the total goes to vaccine safety.

Not only that but Merck exercises control over CDC through the CDC Foundation. Merck contributes millions of dollars every year to the CDC Foundation. The CDC Foundation has received six hundred and twenty million dollars from Merck and other pharmaceutical companies to pay for 824 programs at the CDC.

Merck representative sit on the CDC Foundation Board and control the agency activities.

This is what the British Medical Journal said about those conflicts:

"Most of us were shocked to learn that the CDC takes funding from the industry. It is outrageous that industry apparently is allowed to punish the CDC if the agency conducts research that has the potential to cut into profits."

Corruption is systemic at FDA too shockingly 45 percent of FDA's budget comes from the industry. Pharmaceutical companies pay billions of dollars in fees annually to FDA to fast track drugs. Between 2000-2010 pharmaceutical companies paid 3.4 billion dollars to FDA to get drug approvals, and those payments by industry have caused FDA and CDC to treat the vaccine makers not as a regulated entity but as partners and clients and friends.

According to Michael Carome, who is a former HHS employee "Instead of a regulator and regulated industry, we now have a partnership that relationship has tilted the FDA away from public health perspective to an industry friendly perspective. And that's why your doctor does not know the truth about Gardasil."

This is another thing your doctor probably doesn't know. The government agency NIH actually developed the key component for the Gardasil vaccine and NIH owns part of the patent and receives royalties on it. Not only does NIH the agency receive millions and millions of dollars annually from the vaccine, but also the individual scientists who worked on the vaccine within the agency are entitled to make one hundred and fifty thousand dollars a year in royalty payments from Merck.

Oh, every time your pediatrician sells one of those four hundred and twenty dollar vaccines to your child or you, NIH scientists and HHS scientists and the agencies themselves

are making money on that transaction. And that's why your doctor doesn't know what's happening because he's getting his information or her information from those agencies.

So, there are many, many, other shocking conflicts that I don't have time to talk about today between Merck and the other regulated vaccine makers and the industry that's supposed to be protecting the public from that regulated industry.

I just want to talk for a moment about one example. From 2002 to 2009 Julie Gerberding was the director of CDC and she oversaw all, all of this crooked science that went into the approvals in 2006 and 2007 of Merck's Gardasil vaccine. She was rewarded by Merck.

When she left the agency in 2009, she was hired by Merck as the president of its vaccine division and Merck gave her a salary of 2.5 million dollars a year, and 38 million dollars in stock options. And that kind of dough buys a lot of loyalty from regulators.

They know what's at the end of the line for them if they behave and if they do what Merck and the other company has asked them to do. And these are the reasons that your pediatrician, who's giving your daughter that Gardasil vaccine believing that it may someday save her life doesn't know about the risk and perils and the inefficacy that are attended to that vaccine cause that regulators from whom he's getting or she's getting her information have been corrupted by this company.

And most of you probably know this is a difficult issue for people like myself who are concerned with vaccine injuries to address, because the press will not cover these issues because there's 5.4 billion dollars that go from these companies to advertising on TV and radio and newspapers and on the web every year and nobody wants to lose advertising revenue. And the Congress has been bought off the regulatory agencies have been captured and we can't use the courts because you can't sue a vaccine maker for injuring yourself or your child.

We've figured out ways around those laws and we're going to sue Merck. And if you are Merck and you're listening to this tape.

We're going to come for you and we're gonna get justice for these girls and these boys who you've injured because of your greed.

And if you're a mother or a father who are listening to this, we'd like your support. It's just the fact that the more monetary support the Children's Health Defense has, the more of these cases that we can bring and we're going to get justice. And we're going to bring these cases, and sue companies like Merck until we get that justice. We want your money and we want your support and we want your membership.

But more than anything, we want you to protect your child on this vaccine and for other injuries and for that reason we made this tape. Not only so that you can be informed about the science and you can ask the questions of your pediatrician or you can give him a copy of this tape and ask him to watch it and respond to it.

And if you're a pediatrician I would ask you to actually look at the science and not resort to appeals to authority because, to say "well I know it's safe because CDC says it's safe", or WHO says it's safe or the AAP says it's safe because all of those agencies and organizations have been corrupted by pharmaceutical industry money. You need to actually look at the science.

And you need to read the science critically and if you do that, you'll find that the things that I've talked about in this tape are real. That these injuries are real and that we have got to save our children from this cataclysm.

I want to thank you for listening to this video and urge you to join Children's Health Defense.

Sign up for free news and updates from Robert F. Kennedy, Jr. and the Children's Health Defense. CHD is planning many strategies, including legal, in an effort to defend the health of our children and obtain justice for those already injured. Your support is essential to CHD's successful mission.

Republishing Guidelines

Studies worldwide demonstrate HPV vaccine safety and no association with serious autoimmune and neurological diseases or problems during pregnancy

CLAIM

the autoimmune diseases and menstrual cycle problems and fertility problems [...] and all of the other things that we've now seen are associated with the [HPV] vaccine

VERDICT

UNSUPPORTED

DETAILS

Inadequate support: The HPV vaccine has an excellent safety profile based on current scientific evidence. There is no evidence of an association between the HPV vaccine and any of the medical conditions mentioned in this claim.

KEY TAKE AWAY

The HPV vaccine has an excellent safety profile, as shown by studies conducted in different parts of the world on millions of people. These studies found no association between the HPV vaccine and serious adverse events such as autoimmune and neurological diseases.

FULL CLAIM: the autoimmune diseases and menstrual cycle problems and fertility problems and pain and dizziness and seizures and all of the other things that we've now seen are associated with the [HPV] vaccine

SUMMARY

This video was published in May 2019 by the group Children's Health Defense, and was trending on Facebook in November 2019. It has received more than 7,000 interactions (including likes, comments and shares) and more than 100,000 views to date. In this video, Robert F. Kennedy Jr. claims that Gardasil is associated with "autoimmune diseases and menstrual cycle problems and fertility problems". Gardasil is a vaccine against the human papillomavirus (HPV). Two forms of the vaccine are currently available, one which targets four HPV strains, namely HPV 6, 11, 16 and 18, which are responsible for most cases of cervical, anal, vulvar, vaginal, and penile cancer, as well as genital warts. The other vaccine targets nine HPV strains (HPV 6, 11, 16, 18, 31, 33, 45, 52, and 58).

There is no scientific evidence supporting this claim. In fact, several studies conducted in different parts of the world have demonstrated that the HPV vaccine has an excellent safety profile. For example, a large-scale study in Denmark and Sweden examining almost a million girls found "no evidence supporting associations between exposure to [the HPV] vaccine and autoimmune, neurological, and venous thromboembolic adverse events"[1]. A study in France looking at more than 1,000 girls found that "no evidence of an increase in the risk of the studied [autoimmune diseases] was observable following vaccination with Gardasil within the time periods studied"[2]. A study in the United Kingdom "found no evidence of an increased risk of Guillain–Barré syndrome [a neurological disorder] following HPV vaccination"[3]. Researchers in Norway found "no indication of increased risk of [chronic fatigue syndrome] following HPV vaccination"[4]. And a U.S. study found no association between the HPV vaccine and reduced fertility[5].

Several other studies that analyzed the combined findings of multiple studies came to similar conclusions. A large meta-analysis of more than 100 studies and 2.5 million people found "no consistent evidence of an increased risk" of autoimmune or neurological problems[6], as did a U.S. review[7]. And a review of data from the Vaccine Adverse Event Reporting System (VAERS) showed no association between serious adverse events and the HPV vaccine in pregnant women and their children[8].

In 2017, the World Health Organization (WHO) published a position paper on the use, safety, and effectiveness of the HPV vaccine. Safety evaluations were among the scientific evidence used to support its recommendation that "routine HPV vaccination should be included in national immunization programmes". In the paper's summary, the WHO stated that "HPV vaccines have an excellent safety profile".

SCIENTISTS' FEEDBACK

Jack Cuzick, John Snow Professor of Epidemiology, Wolfson Institute, Queen Mary University of London:
This is not a defensible set of statements. There have been millions of girls vaccinated and nothing other than vaccine site reactions have been established despite widespread careful review[9,10,11].

Kevin Ault, Professor, University of Kansas School of Medicine:
According to multiple well-done studies, the human papillomavirus (HPV) vaccine is not associated with autoimmune or neurological diseases. A large Scandinavian study of approximately 1,000,000 adolescent females looked at 29 different autoimmune and neurological conditions and "found no evidence supporting associations between exposure to […] vaccine and autoimmune, neurological,

and venous thromboembolic adverse events."[1]Another large meta-analysis of 2,500,000 subjects in 109 studies found "no consistent evidence of an increased risk" of autoimmune and neurological diseases[3]. It is inaccurate to state that this vaccine is associated with chronic health problems.

READ MORE

We previously fact-checked a claim that "HPV vaccine may lead to elimination of cervical cancer", which was found to be accurate by reviewers.

REFERENCES

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- 2 – Grimauldi-Bensouda et al. (2013) Autoimmune disorders and quadrivalent human papillomavirus vaccination of young female subjects. Journal of Internal Medicine.
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Cancer Vaccine

Published on: 25 Nov 2019 | Editor: Flora Teoh

Health Feedback is a non-partisan, non-profit organization dedicated to science education. Our reviews are crowdsourced directly from a community of scientists with relevant expertise. We strive to explain whether and why information is or is not consistent with the science and to help readers know which news to trust.
Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

Vaccine Injury (October 10, 2019)

CHD Article:

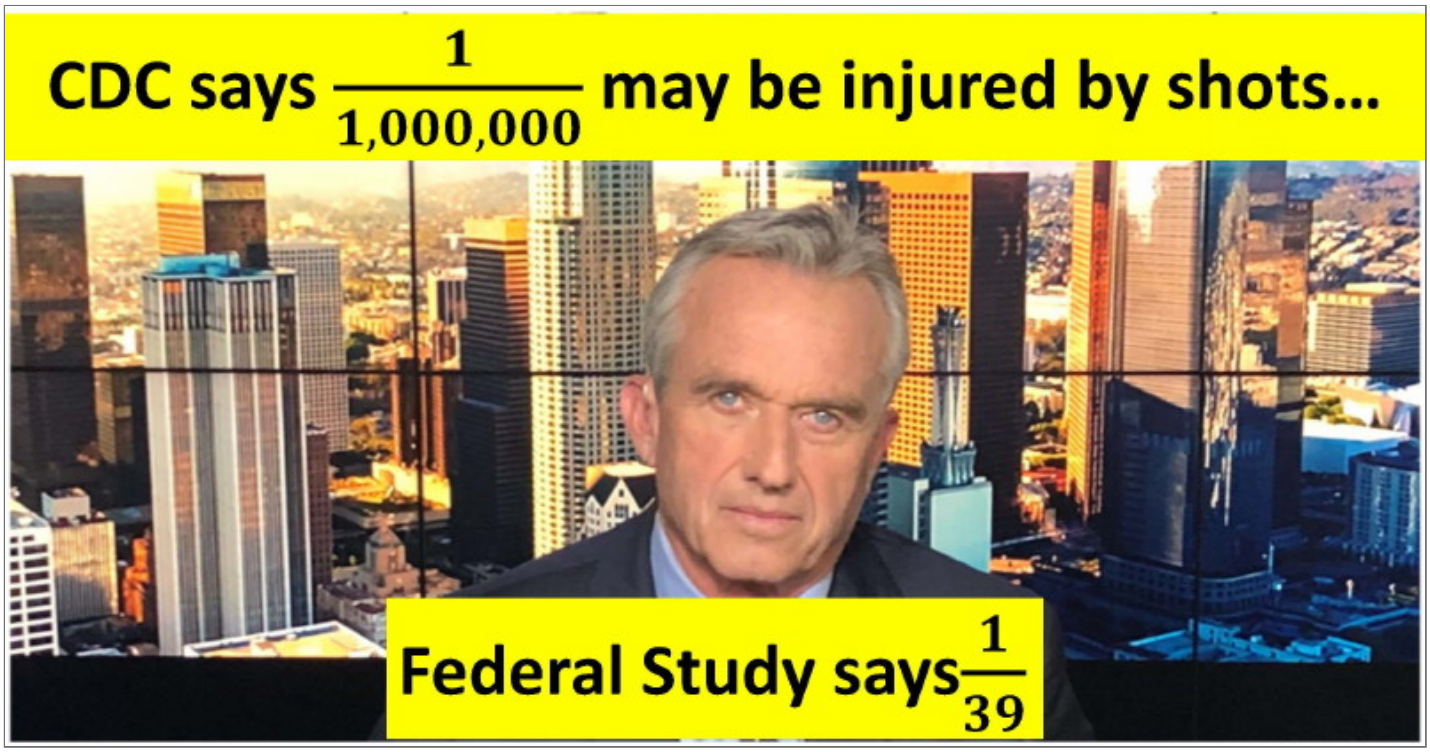
https://childrenshealthdefense.org/news/vaccine-injuries-ratio-one-for-every-39-vaccines-administered/?fbclid=IwAR3VkP238fatVGiL9VWry6nkT10M2kbq-o2RTLT20xZfVPtu8h_7xBstfNs

Science Feedback Fact Check Article:

https://healthfeedback.org/claimreview/claim-by-rfk-jr-that-one-vaccine-injury-occurs-for-every-39-vaccinations-is-unsupported-by-scientific-data/?fbclid=IwAR2vPkWgnR8v7gWP4Ijch3MdW9ZahQCXoyulcpnVG3Gov1519E9qeERJFrI

OCTOBER 10, 2019

Vaccine Injuries Ratio: One for Every 39 Vaccines Administered



By Robert F. Kennedy, Jr.

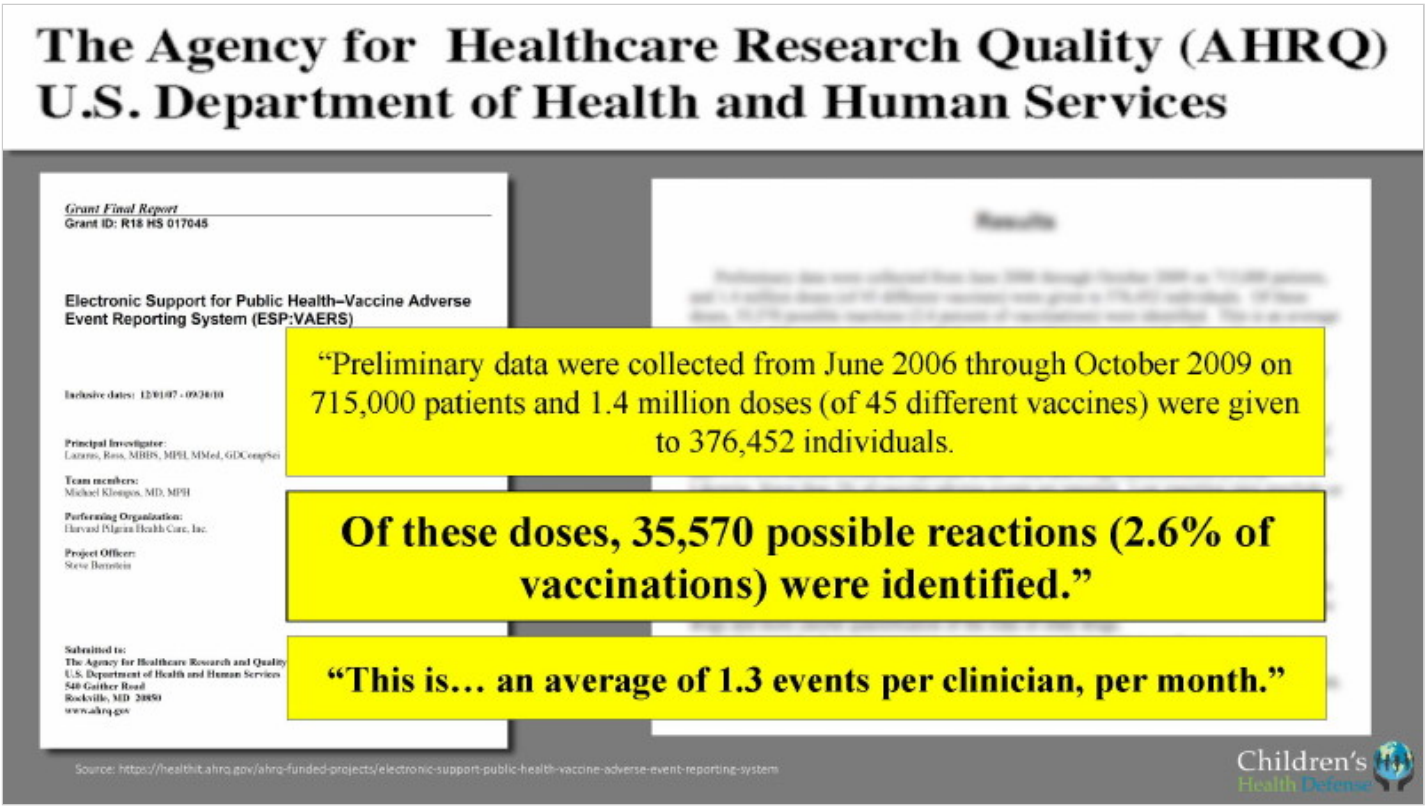
During our September 18 debate, Spectrum TV host Renee Eng asked Kaiser's, Dr. Robert Riewerts, how many vaccine injuries he had seen during his 30 years as a Pediatrician. His answer: "None, not a single one."

Slide 1. A 2010 HHS pilot study by the AHCR.

Slide 1 shows a 2010 U.S. Health and Human Services (HHS) pilot study by the Federal Agency for Health Care Research (AHCR) to test the efficiency of a state-of-the-art machine counting (AI) system on data records from the Harvard Pilgrim HMO. Those government researchers found that 2.6% of vaccination

resulted in injuries—a ratio one for every 39 vaccines administered. The same study found that typical clinicians see 1.3 vaccine injuries per month.

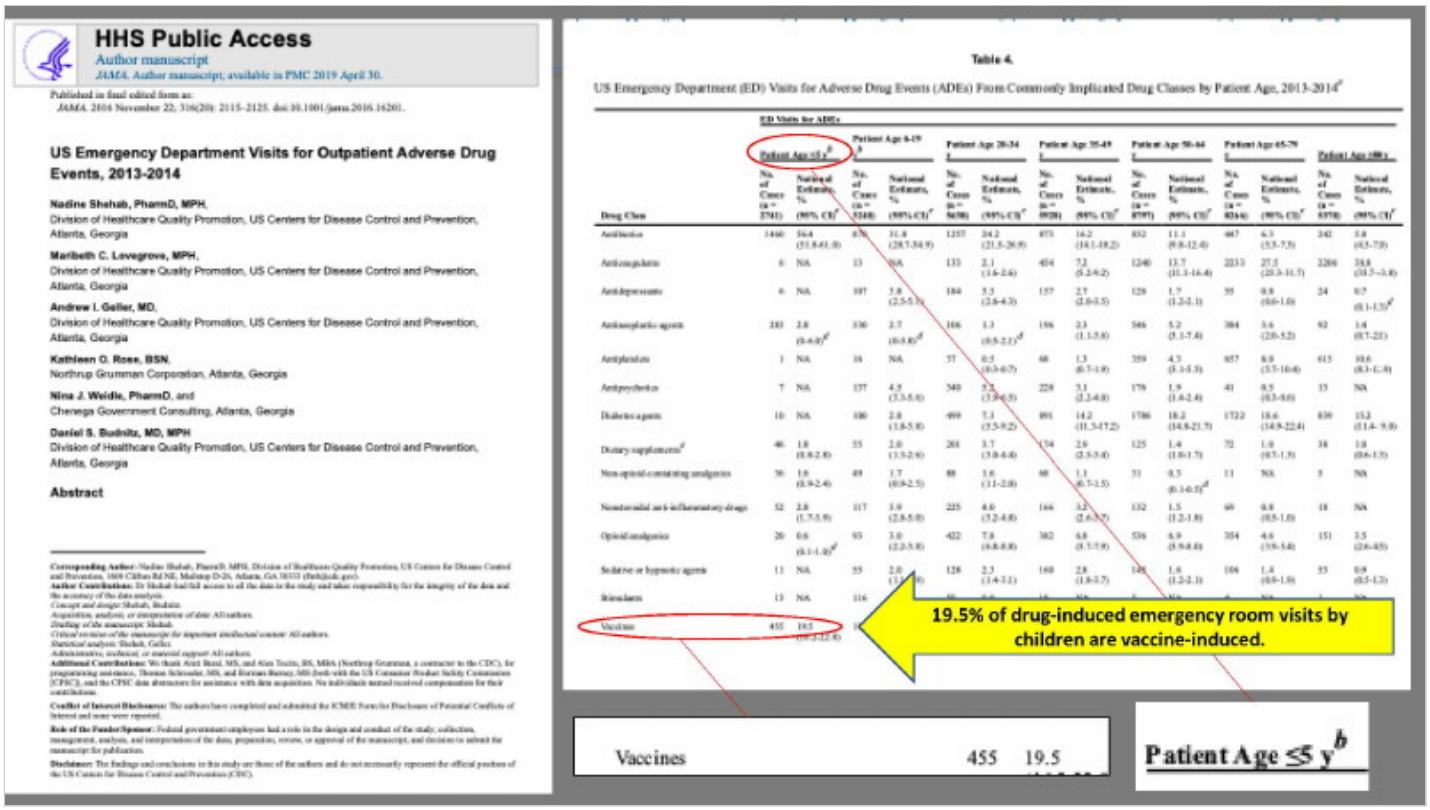
Source: https://healthit.ahrq.gov/ahrq-funded-projects/electronic-support-public-health-vaccine-adverse-event-reporting-system



Slide 2. A table from HHS's 2016 Neiss-Cades survey published in JAMA

Slide 2 is a table from HHS's 2016 Neiss-Cades survey published in JAMA reporting an astonishing 19.5% of children under five who are admitted to emergency rooms for drug reactions are suffering vaccine injuries. This finding certainly represents an undercount since pediatric hospitals, which treat most serious injuries, were badly underrepresented in the database, (Only six of 63 hospitals surveyed).

Source: https://www.ncbi.nlm.nih.gov/pubmed/27893129



HHS Public Access
Author manuscript
JAMA. Author manuscript; available in PMC 2019 April 30.

Published in final edited form as:
JAMA. 2016 November 22; 316(20): 2115–2125. doi:10.1001/jama.2016.16201.

US Emergency Department Visits for Outpatient Adverse Drug Events, 2013-2014

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Abstract

Table 4.

US Emergency Department (ED) Visits for Adverse Drug Events (ADEs) From Commonly Implicated Drug Classes by Patient Age, 2013-2014[a]

Drug Class	ED Visits for ADEs: Patient Age <5 y[b] No. of Cases (n = 3741)	National Estimate, % (95% CI)[c]	Patient Age 6-19 y No. of Cases (n = 3348)	National Estimate, % (95% CI)[c]	Patient Age 20-34 y No. of Cases (n = 5658)	National Estimate, % (95% CI)[c]	Patient Age 35-49 y No. of Cases (n = 5928)	National Estimate, % (95% CI)[c]	Patient Age 50-64 y No. of Cases (n = 8797)	National Estimate, % (95% CI)[c]	Patient Age 65-79 y No. of Cases (n = 8264)	National Estimate, % (95% CI)[c]	Patient Age ≥80 y No. of Cases (n = 6578)	National Estimate, % (95% CI)[c]
Antibiotics	1460	39.4 (31.9-61.0)	870	31.8 (28.7-34.9)	1357	24.2 (21.5-26.9)	873	16.2 (14.1-18.2)	832	11.1 (9.8-12.4)	667	6.3 (5.3-7.3)	342	3.8 (3.3-7.0)
Anticoagulants	6	NA	13	NA	133	2.1 (1.6-2.6)	454	7.2 (6.2-8.2)	1240	13.7 (11.3-16.4)	2233	27.5 (25.3-31.7)	2266	34.8 (33.7-3.8)
Antidepressants	6	NA	107	3.8 (2.5-5.1)	384	5.3 (2.6-8.3)	557	2.7 (2.0-3.5)	529	1.7 (1.2-2.1)	55	0.8 (0.6-1.0)	24	0.7 (0.1-1.3)[d]
Antineoplastic agents	283	2.8 (0.4-0)[d]	130	2.7 (0.5-8.0)[d]	166	1.3 (0.5-2.1)[d]	196	2.3 (1.1-3.6)	566	5.2 (3.1-7.4)	384	3.6 (2.0-5.2)	92	1.4 (0.7-2.1)
Antiplatelets	1	NA	16	NA	57	0.5 (0.3-0.7)	68	1.3 (0.7-1.9)	359	4.3 (3.1-5.5)	657	8.9 (5.7-10.4)	615	10.6 (8.3-1.4)
Antipsychotics	7	NA	157	4.5 (3.2-5.1)	540	5.7 (3.9-7.5)	228	3.1 (2.2-4.0)	178	1.9 (1.4-2.4)	41	0.5 (0.2-0.6)	15	NA
Diabetes agents	10	NA	100	2.8 (1.8-3.8)	499	7.3 (5.5-9.2)	891	14.2 (11.3-17.2)	1786	18.2 (14.8-21.7)	1722	18.6 (14.9-22.4)	839	15.3 (11.4-9.8)
Dietary supplements[e]	46	1.8 (0.8-2.8)	55	2.0 (1.3-2.6)	201	3.7 (3.0-4.4)	174	2.9 (2.3-3.4)	125	1.4 (1.0-1.7)	72	1.0 (0.7-1.3)	38	1.0 (0.6-1.3)
Non-opioid-containing analgesics	39	1.6 (0.9-2.4)	49	1.7 (0.9-2.5)	88	1.6 (1.1-2.0)	68	1.1 (0.7-1.5)	31	0.3 (0.1-0.5)[d]	11	NA	5	NA
Nonsteroidal anti-inflammatory drugs	52	2.8 (1.7-3.9)	117	3.9 (2.8-5.0)	225	4.0 (3.2-4.8)	166	3.2 (2.6-3.7)	132	1.5 (1.2-1.8)	69	0.8 (0.5-1.0)	18	NA
Opioid analgesics	20	0.6 (0.1-1.0)[d]	93	3.0 (2.2-3.8)	422	7.8 (6.8-8.8)	382	6.8 (5.7-7.9)	336	6.9 (5.9-8.0)	354	4.6 (3.9-5.4)	151	3.5 (2.6-4.5)
Sedative or hypnotic agents	11	NA	55	2.0 (1.1-2.9)	128	2.3 (1.4-3.1)	160	2.8 (1.8-3.7)	145	1.6 (1.2-2.1)	104	1.4 (0.9-1.8)	55	0.9 (0.5-1.2)
Stimulants	13	NA	116											
Vaccines	455	19.5												

19.5% of drug-induced emergency room visits by children are vaccine-induced.

Vaccines 455 19.5

Patient Age ≤5 y[b]

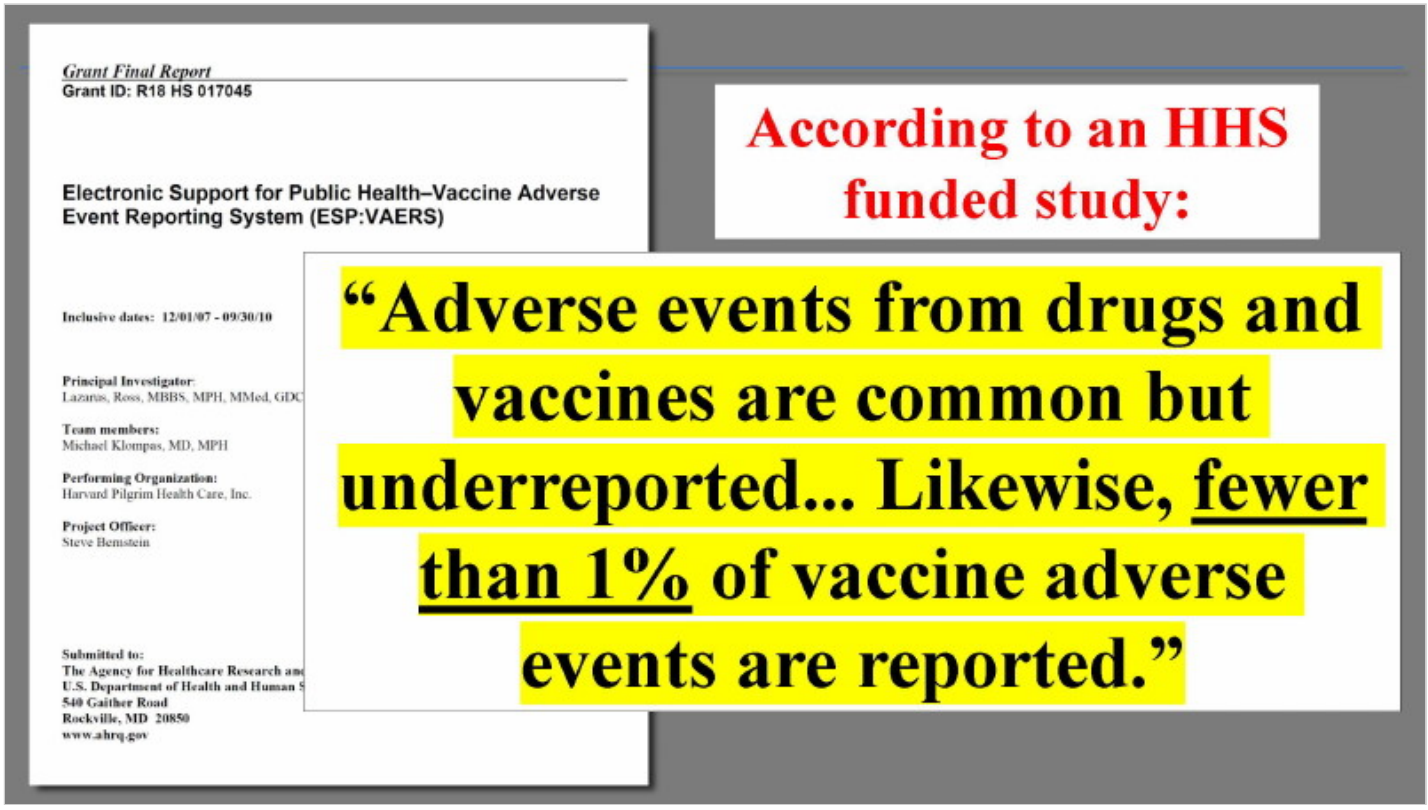
How is it then that Dr. Riewerts has given thousands of vaccines and never seen an injury?

Medical schools—largely funded by Pharma, do not teach doctors to recognize vaccine injuries, and indoctrinate pediatricians to believe such injuries don't exist. CDC tells doctors that vaccine injury is vanishingly rare. Therefore, Pediatricians like Dr. Riewerts whose patients suffer vaccine injury like seizures, epilepsy, allergies, autoimmune and neurological injuries, or SIDS, are likely to dismiss those incidents as "sad coincidences" unrelated to vaccines and never report them to VAERS.

Slide 3. AHCR confirmed these assessments, finding that "fewer than 1% of vaccine injuries were reported.

Indeed, HHS commissioned the AHCR pilot study in response to criticism that vaccine injuries were horribly underreported. AHCR confirmed these assessments, finding that "fewer than 1% of vaccine injuries were reported."

Source: https://healthit.ahrq.gov/sites/default/files/docs/publication/r18hs017045-lazarus-final-report-2011.pdf



Slide 4. CDC terminated the system-wide roll-out and stopped returning phone calls from their sister agency.

Slide 4 shows that CDC officially were so panicked by AHRC's revelations that they killed the AI system-wide roll-out and stopped returning phone calls from their sister agency. Today, CDC purposefully continues to use a surveillance system designed to under-count vaccine injuries by over 99%!

Source: https://healthit.ahrq.gov/sites/default/files/docs/publication/r18hs017045-lazarus-final-report-2011.pdf

Electronic Support for Public Health - Vaccine Adverse Event Reporting System - 2010

Project Name: Electronic Support for Public Health - Vaccine Adverse Event Reporting System (ESP:VAERS)
Principal Investigator: Lazarus, Ross, M.P.H., M.Med., M.B.B.S., G.D.Comp.Sci.
Organization: Harvard Pilgrim Health Care, Inc.
Mechanism: RFA: HS07-002: Ambulatory Safety and Quality Program: Enabling Quality Measurement through Health Information Technology (EQM)
Grant Number: R18 HS 017045
Project Period: December 2007 – September 2010, Including No-Cost Extension
AHRQ Funding Amount: $999,995
Summary Status as of: September 2010, Completion of Grant

Unfortunately, there was never an opportunity to perform system performance assessments because the necessary CDC contacts were no longer available and the CDC consultants responsible for receiving data were no longer responsive to our multiple requests to proceed with testing and evaluation.

Claim by Robert F Kennedy Jr that one “vaccine injury” occurs for every 39 vaccinations is unsupported by scientific data

CLAIM

Vaccine Injuries Ratio: One for Every 39 Vaccines Administered

VERDICT

UNSUPPORTED

DETAILS

Inadequate support: The 1-in-39 figure is based on data captured in the U.S. VAERS system. VAERS records adverse events occurring after vaccination, but on its own does not prove that vaccines caused the adverse event.

KEY TAKE AWAY

The claim that one vaccine injury occurs for every 39 vaccines administered is based on VAERS data. However, VAERS data only tells us that an adverse event occurred after vaccination; on its own it cannot prove that vaccines caused the adverse event. A vast body of scientific literature demonstrates that vaccines are safe.

FULL CLAIM: Vaccine Injuries Ratio: One for Every 39 Vaccines Administered

REVIEW

This claim is contained within the headline of an article published by Robert F. Kennedy Jr. in October

2019, stating that the vaccine injuries ratio is "one for every 39 vaccines administered". According to the article, the data used to support this claim comes from the U.S. Vaccine Adverse Events Reporting System (VAERS), more specifically, a project report from the Agency for Healthcare Research and Quality, part of the U.S. Department of Health and Human Services. The aim of this project was to improve the reporting rate of adverse reactions post-vaccination by enhancing support for electronic recording of adverse events in VAERS. However, the project was not designed to determine whether adverse reactions were caused by vaccines.

The 1-in-39 figure that Kennedy cites comes from preliminary data in the project, wherein "a total of 1.4 million vaccine doses (of 45 different vaccines) were given to 376,452 individuals. Of these doses, 35,570 possible reactions (2.6 percent of vaccinations) were identified."

This data only tells us that these reactions occurred after vaccination. However, Kennedy misleadingly uses this to claim that this shows a causal association between these reactions and vaccines, committing what is called the post hoc ergo propter hoc logical fallacy.

The severity of these reactions is also unknown from this data. Vaccines—as with all medical interventions—come with the risk of adverse reactions. However, most adverse reactions are mild, resolve quickly, and do not cause lasting damage (such as soreness, swelling and redness at the injection site, as well as fever), unlike vaccine-preventable diseases such as measles and polio. The benefits of vaccines far outweigh the risks from adverse reactions. The claim does not distinguish between mild and serious adverse reactions, but is framed to artificially elevate any risk associated with vaccines.

In fact, the scientific evidence demonstrating vaccine safety is well-established: the National Institute of Medicine—part of the National Academies of Science, Engineering and Medicine—reviewed childhood immunization schedules in 2013 and found them to be safe. The American Academy of Pediatricians has also collected a large evidence base in which thousands of individuals were studied, once again underscoring the excellent safety record of childhood vaccines.

Vaccine

Published on: 13 Jan 2020 | Editor: Flora Teoh

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Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

HPV Vaccine (March 4, 2020)

CHD Post with Commentary:

Linked Newsmax article that CHD posted:

https://www.newsmax.com/Health/dr-brownstein/human-papillomavirus-vaccine-autoimmune/2020/03/03/id/956764/

Science Feedback Fact Check Article:

https://healthfeedback.org/claimreview/studies-worldwide-demonstrate-hpv-vaccine-safety-and-no-association-with-serious-autoimmune-and-neurological-diseases-or-problems-during-pregnancy/

Dr. David Brownstein, editor of ***Dr. David Brownstein's Natural Way to Health* newsletter,** is a board-certified family physician and one of the nation's foremost practitioners of holistic medicine. Dr. Brownstein has lectured internationally to physicians and others about his success with

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Tags: human papillomavirus | vaccine | autoimmune

HPV Vaccine Linked to Autoimmune Events

By **Dr. Brownstein**
Tuesday, 03 March 2020 04:33 PM
Current | Bio | Archive

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The Gardasil vaccine was first approved for the prevention of the human papillomavirus (HPV) in June 2006. It was eventually added to the childhood immunization schedule and recommended to all girls between the ages of 11 and 12. But since then, there have been reports linking Gardasil to autoimmune illnesses.

In order to see if there was an association, scientists used an epidemiological assessment of the vaccine adverse event reporting system database (VAERS) looking for adverse events with Gardasil from 2006 to 2014.

They found a 4.6-fold increase risk of serious autoimmune adverse events outcomes of gastroenteritis, a 7.6- fold increase lupus, 5.6-fold increase in rheumatoid arthritis, 1.6-fold increase in central nervous system demyelinating conditions like multiple sclerosis, 15-

fold increase in ovarian damage, and a 10-fold increase of irritable bowel syndrome in women and girls who were given the Gardasil vaccine.

The authors concluded, “Confirmatory epidemiological studies in other databases should be undertaken and long-term clinical consequences of HPV-linked [serious autoimmune events] should be examined.”

When the HPV vaccine hit the market, there were reports of autoimmune adverse events that spanned multiple countries, including America.

I’ve seen young girls suffer premature ovarian failure, total body hair loss, and arthritis after taking the vaccine.

Gardasil contains a large amount of aluminum, which is a known neurotoxin and has no business being injected into any living being.

Cervical cancer doesn’t kill enough people for it to make sense to vaccinate the entire population of young people. (Of course, any death from cervical cancer is tragic, and I am not trying to minimize that in any way.)

Cervical cancer can be avoided with gynecologic checkups and Pap smears. HPV vaccination is fraught with too many side effects. I do not recommend it.

Posts by Dr. Brownstein

- Finding the Real Cause of Breast Cancer
- Antidepressant Unsafe for Teens
- View More Posts by Dr. Brownstein

Newsmax Blogs:

- Dr. Oz: Beware of Exaggerated CBD Claims
- Dr. Oz: Exercises to Control Bladder Leaks

- View More Newsmax Blogs

it)

Studies worldwide demonstrate HPV vaccine safety and no association with serious autoimmune and neurological diseases or problems during pregnancy

CLAIM

the autoimmune diseases and menstrual cycle problems and fertility problems [...] and all of the other things that we've now seen are associated with the [HPV] vaccine

VERDICT

UNSUPPORTED

DETAILS

Inadequate support: The HPV vaccine has an excellent safety profile based on current scientific evidence. There is no evidence of an association between the HPV vaccine and any of the medical conditions mentioned in this claim.

KEY TAKE AWAY

The HPV vaccine has an excellent safety profile, as shown by studies conducted in different parts of the world on millions of people. These studies found no association between the HPV vaccine and serious adverse events such as autoimmune and neurological diseases.

FULL CLAIM: the autoimmune diseases and menstrual cycle problems and fertility problems and pain and dizziness and seizures and all of the other things that we've now seen are associated with the [HPV] vaccine

SUMMARY

This video was published in May 2019 by the group Children's Health Defense, and was trending on Facebook in November 2019. It has received more than 7,000 interactions (including likes, comments and shares) and more than 100,000 views to date. In this video, Robert F. Kennedy Jr. claims that Gardasil is associated with "autoimmune diseases and menstrual cycle problems and fertility problems". Gardasil is a vaccine against the human papillomavirus (HPV). Two forms of the vaccine are currently available, one which targets four HPV strains, namely HPV 6, 11, 16 and 18, which are responsible for most cases of cervical, anal, vulvar, vaginal, and penile cancer, as well as genital warts. The other vaccine targets nine HPV strains (HPV 6, 11, 16, 18, 31, 33, 45, 52, and 58).

There is no scientific evidence supporting this claim. In fact, several studies conducted in different parts of the world have demonstrated that the HPV vaccine has an excellent safety profile. For example, a large-scale study in Denmark and Sweden examining almost a million girls found "no evidence supporting associations between exposure to [the HPV] vaccine and autoimmune, neurological, and venous thromboembolic adverse events"[1]. A study in France looking at more than 1,000 girls found that "no evidence of an increase in the risk of the studied [autoimmune diseases] was observable following vaccination with Gardasil within the time periods studied"[2]. A study in the United Kingdom "found no evidence of an increased risk of Guillain–Barré syndrome [a neurological disorder] following HPV vaccination"[3]. Researchers in Norway found "no indication of increased risk of [chronic fatigue syndrome] following HPV vaccination"[4]. And a U.S. study found no association between the HPV vaccine and reduced fertility[5].

Several other studies that analyzed the combined findings of multiple studies came to similar conclusions. A large meta-analysis of more than 100 studies and 2.5 million people found "no consistent evidence of an increased risk" of autoimmune or neurological problems[6], as did a U.S. review[7]. And a review of data from the Vaccine Adverse Event Reporting System (VAERS) showed no association between serious adverse events and the HPV vaccine in pregnant women and their children[8].

In 2017, the World Health Organization (WHO) published a position paper on the use, safety, and effectiveness of the HPV vaccine. Safety evaluations were among the scientific evidence used to support its recommendation that "routine HPV vaccination should be included in national immunization programmes". In the paper's summary, the WHO stated that "HPV vaccines have an excellent safety profile".

SCIENTISTS' FEEDBACK

Jack Cuzick, John Snow Professor of Epidemiology, Wolfson Institute, Queen Mary University of London:
This is not a defensible set of statements. There have been millions of girls vaccinated and nothing other than vaccine site reactions have been established despite widespread careful review[9,10,11].

Kevin Ault, Professor, University of Kansas School of Medicine:
According to multiple well-done studies, the human papillomavirus (HPV) vaccine is not associated with autoimmune or neurological diseases. A large Scandinavian study of approximately 1,000,000 adolescent females looked at 29 different autoimmune and neurological conditions and "found no evidence supporting associations between exposure to […] vaccine and autoimmune, neurological,

and venous thromboembolic adverse events."[1]Another large meta-analysis of 2,500,000 subjects in 109 studies found "no consistent evidence of an increased risk" of autoimmune and neurological diseases[3]. It is inaccurate to state that this vaccine is associated with chronic health problems.

READ MORE

We previously fact-checked a claim that "HPV vaccine may lead to elimination of cervical cancer", which was found to be accurate by reviewers.

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Cancer Vaccine

Published on: 25 Nov 2019 | Editor: Flora Teoh

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Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

Autism (March 13, 2020)

Article that CHD linked to in post:

https://www.theepochtimes.com/federal-court-case-reveals-cdc-lacks-evidence-to-claim-vaccines-dont-cause-autism_3270994.html

Science Feedback Fact Check Article:

https://sciencefeedback.co/claimreview/contrary-to-viral-facebook-claim-numerous-studies-show-vaccines-dont-cause-autism/

THE EPOCH TIMES

print

The results of a federal lawsuit raise questions about the quality of science the CDC relies on for its vaccine programs. (Kevin C. Cox/Getty Images)

NEWS

Federal Court Case Reveals CDC Lacks Evidence to Claim 'Vaccines Don't Cause Autism,' Watchdog Groups Assert

RELATED

After FOIA requests ignored, nonprofits use lawsuit to compel CDC to reveal research used to inform several public vaccination programs

Thousands Rally in DC for Vaccine Injury Awareness

24

BY CONAN MILNER | March 13, 2020 Updated: March 15, 2020

Print

A recent lawsuit to force the U.S. Centers for Disease Control and Prevention (CDC) to respond to six Freedom of Information Act (FOIA) requests has revealed that claims that several vaccines don't cause autism have no scientific basis, vaccine watchdog groups assert.

The only study that the CDC provided that specifically examined the questions raised by the lawsuit found a possible link to autism, according to the Informed Consent Action Network (ICAN), one of the groups that filed the suit.

Autism is a developmental disability that can cause significant social and behavioral challenges, and the number of cases of autism has grown exponentially in the past few decades. Recent data finds that 1 in 36 children born in the United States this year will have autism (up from 1 in 10,000 in 1980). While there are many theories, an official cause for the sharp rise hasn't been determined.

Concern that vaccines are responsible for the rise in autism comes largely from thousands of parents of autistic children who attest to an immediate and dramatic change in their developmentally normal children immediately following vaccination. This anecdotal evidence has been dismissed by health officials as unreliable.

Vaccine activists worry there is a connection between the concurrent rise of autism and the increase in immunizations that U.S. children are required to receive. Health authorities have dismissed this link, claiming it to be a thoroughly debunked conspiracy theory. The FDA, which is responsible for approving vaccines, and the CDC, which is the major U.S. purchaser and reseller of vaccines, have repeatedly assured the public that exhaustive research shows no such link.

But that claim is now in question after the CDC provided only 20 studies in response to the ICAN and Institute for Autism Science suit and only after being taken to court; none of the studies appear to resolve the fundamental question.

On June 21, 2019, the two nonprofits filed six FOIA requests with the CDC to obtain evidence that federal health authorities used to prove vaccine safety. The requests sought studies on a handful of vaccines given in the first six months in a child's life: DTaP (diphtheria, tetanus, and pertussis), Engerix-B, Recombivax HB, Prevnar 13, Hib, and polio (IPV) vaccines. The FOIA also requested the CDC provide studies to support the claim that cumulative exposure to these vaccines during the first six months of life doesn't cause autism.

Six months later, the two nonprofits filed a 36-page complaint on Dec. 19, 2019, in a federal court that accused the CDC of falsely claiming that "vaccines don't cause autism."

asserting that studies used to make this claim don't exist.

In response, the CDC provided 20 studies, and the plaintiffs settled, allowing the suit to be voluntarily dismissed. The groups say the studies from the CDC didn't provide the evidence health officials say they do. The groups describe the provided studies as including 18 that didn't produce evidence relevant to the requests (13 were related to the vaccine ingredient thimerosal and five related to both MMR and thimerosal), one related to the MMR vaccine, and one related to antigen exposure, not vaccines.

The only studies relevant to the FOIA requests came from a recent review by the Institute of Medicine (IOM) paid for by the CDC, examining research related to the DTaP vaccine. But the IOM states that it was unable to identify a study to support the claim that DTaP doesn't cause autism.

"The evidence is inadequate to accept or reject a causal relationship between diphtheria toxoid-, tetanus toxoid-, or acellular pertussis-containing vaccine and autism," the report states.

However, the IOM did identify one study showing a causal relationship between DTaP and autism, but said it "was not considered in the weight of epidemiological evidence because it provided data from a passive surveillance system and lacked an unvaccinated comparison population."

That passive surveillance system is the CDC's own follow-up mechanism, put in place to ensure post-market vaccine safety. This mechanism is particularly important for vaccines because of the relatively rapid approval process compared to drugs, the results for which are compared to non-drugged (placebo) populations to reveal side effects.

The lack of studies that compare vaccinated and unvaccinated populations is a sore spot for vaccine safety activists and researchers who say such studies are the only way to discover potential side effects from a vaccine.

The lack of research is unexpected, especially in regards to DTaP, given the National Childhood Injury Act of 1986 stipulated that a study on the DTaP should be conducted. That act was the result of intense lobbying from vaccine makers who successfully argued that they could not be held financially liable for their products because mounting lawsuits would ruin their businesses and jeopardize the nation's vaccine supply. Lawsuits over vaccine injury are now handled in a special court that critics say is stacked against plaintiffs and limits payouts to $250,000.

The act states that the Secretary of Health and Human Services "shall complete a review of all relevant medical and scientific information ... on the nature, circumstances, and extent of the relationship, if any, between vaccines containing pertussis ... and the following

illnesses and conditions." The list of 11 conditions includes autism.

In a press release, Del Bigtree, ICAN founder and producer of the documentary "Vaxxed," says that when it comes to autism, vaccines are the one suspected culprit the CDC claims to have exhaustively investigated. But when asked to back up this claim, the agency could produce nothing substantial, and only did so under duress, he said.

"If the CDC had spent the same resources studying vaccines and autism as it did waging a media campaign against parents that claim vaccines caused their child's autism, the world would be a better place for everyone," Bigtree stated.

ICAN's victories against federal health agencies regarding vaccine safety include getting the Department of Health and Human Services to concede that it couldn't provide a single vaccine safety report to Congress as required by the Mandate for Safer Childhood Vaccines in the National Childhood Vaccine Injury Act of 1986. The nonprofit also got the Food and Drug Administration (FDA) to concede that it doesn't have any clinical trials to support injecting the flu shot or DTaP vaccines into pregnant women, getting the National Institutes of Health to concede that the Task Force on Safer Childhood Vaccines has not made a single recommendation for improving vaccine safety during the period at issue, and got the FDA to produce, via FOIA request, the clinical trials it relied upon to license the current MMR vaccine, which revealed that these clinical trials had in total less than 1,000 participants and far more adverse reactions than previously acknowledged.

The CDC hasn't responded to a request by The Epoch Times about how the public should interpret the ruling; the FDA has declined to comment, saying the case involves CDC litigation. While the CDC website still claims that "vaccines don't cause autism," ICAN says its next step is to get the agency to remove this claim.

Despite ICAN's win, some still say the case lacks credibility because it doesn't provide proof that vaccines cause autism. During a March 5 episode of his internet talk show HighWire, Bigtree addressed that question.

"In a court of law, an eyewitness is the best evidence you can get," Bigtree said. "And we have hundreds of thousands, if not millions, of eyewitness testimony to the destruction of their child and their regression into autism right after DTaP vaccines."

Update: The FDA has declined to comment, noting the case involves CDC litigation.

Follow Conan on Twitter: @ConanMilner

Contrary to viral Facebook claim, numerous studies show vaccines don't cause autism

CLAIM

there are no studies that prove vaccines don't cause autism

VERDICT

INACCURATE

DETAILS

Inaccurate: There is a wide body of scientific literature showing vaccines do not cause autism.
Misrepresents source: Contrary to ICAN's claim, there are studies addressing whether the vaccines specified in ICAN's FOIA lawsuit are associated with autism. The studies show that no such association exists.

KEY TAKE AWAY

A wide array of studies examining different vaccines, including the ones specified in ICAN's lawsuit, demonstrate that there is no association between vaccines and autism.

FULL CLAIM: CDC concedes in federal court that there are no studies that prove vaccines don't cause autism

REVIEW

This claim was originally published on 5 March 2020 in a press release by the anti-vaccine organization Informed Consent Action Network (ICAN), founded by Del Bigtree, who is also the host of the talk show

The HighWire. The claim was disseminated on social media platforms such as Facebook in various formats like memes and videos, which have received more than 790,000 views to date.

The press release, stating that "CDC concedes in federal court that there are no studies that prove vaccines don't cause autism", is founded on the recently concluded proceedings of a Freedom of Information Act (FOIA) lawsuit filed by ICAN against the U.S. Centers for Disease Control and Prevention (CDC). The lawsuit requested that the CDC produce studies showing that the DTaP, Hepatitis B, *Haemophilus influenzae* type b, PCV13 (pneumococcal conjugate) and inactivated polio vaccines—the vaccines used within the first six months of life—do not cause autism.

The CDC responded with a list of 20 peer-reviewed studies[1-20], several of which can already be found on its website. However, ICAN inexplicably concluded that this list meant that "there are no studies that prove vaccines don't cause autism", because "it has no studies to support that [DTaP, Hepatitis B, *Haemophilus influenzae* type b, PCV13 and inactivated polio vaccines] do not cause autism".

Many studies have already shown that vaccines don't cause autism and no biological mechanism has ever been found to support this link, despite the pseudoscientific theories behind thimerosal and aluminum adjuvants.

And as pediatrician Vince Iannelli explained in this article on Vaxopedia, the study by DeStefano *et al.* did in fact examine the individual vaccines listed in ICAN's request, and concluded:

> "*We found no evidence indicating an association between exposure to antibody-stimulating proteins and polysaccharides contained in vaccines during the first 2 years of life and the risk of acquiring [autism spectrum disorder (ASD)], AD, or ASD with regression. We also detected no associations when exposures were evaluated as cumulative exposure from birth to 3 months, from birth to 7 months, or from birth to 2 years, or as maximum exposure on a single day during those 3 time periods. These results indicate that parental concerns that their children are receiving too many vaccines in the first 2 years of life or too many vaccines at a single doctor visit are not supported in terms of an increased risk of autism.*"

Iannelli also pointed out that there is also another study published in the journal Vaccine which looked at general vaccinations[21], not among the CDC's 20 studies, that also arrived at the same conclusion:

> "*In this study, we could not find the evidence that MMR vaccination increases the risk of ASD onset. The present results support the findings from the previous case–control studies conducted in Caucasian populations. Furthermore, we could not find any evidence that other types of vaccines or a combined effect of multiple vaccines was associated with ASD onset. Therefore, this study did not support the theory that vaccinations should be avoided to reduce the risk of ASD onset. We should be more concerned about acquiring infectious diseases by avoiding vaccinations.*"

In summary, contrary to ICAN's claim, there is already a wide array of studies all pointing to the fact that vaccines—including the ones specified in ICAN's FOIA lawsuit—are **not associated with autism**.

ICAN also claimed their lawsuit as a "victory" against the CDC. As Dorit Rubinstein Reiss, professor of law at University of California Hastings, explains here:

> "*The lawsuit ended with a settlement. In the settlement, the CDC submitted 20 studies as 'responsive to the FOIA requests', and the parties agreed that "the above-captioned action is voluntarily dismissed, with prejudice.*
>
> *What does this mean legally? It means the parties agree that what CDC submitted fills the FOIA requests, the lawsuit is dismissed, and cannot be filed again as it was ("with prejudice"). That is all it legally means.*"

Therefore, ICAN did not win the lawsuit nor did the CDC lose – this is even clearly explained in the conclusion of the lawsuit.

Reiss concludes with an appropriate analogy:

> "*When ICAN rejects the CDC's conclusions based on the entirety of the data, it is as if ICAN were saying:*
>
> *CDC can't claim that 'horse feed doesn't turn horses into unicorns' because all types of horse feed haven't been studied.*
>
> *The original claim was that oats could turn horses into unicorns, but through extensive study, this was shown to be false. There are also studies on what does lead to the development of horns on other animals, which does not include horsefeed, and evidence that routinely used horsefeed is generally safe. There is also a lack of evidence to suggest that any other type of horse food is able to turn horses into unicorns.*
>
> *ICAN is trying to imply that since alfalfa, hay, grass, beets, and soybeans haven't been studied, the CDC can't claim horse feed doesn't turn horses into unicorns, even though there is no evidence to suggest that any horse food [will] turn a horse into a unicorn.*"

SCIENTISTS' FEEDBACK

Mark Pepys, Professor, Division of Medicine, University College London:
[*this comment was first published on Metafact*]
There is absolutely no single shred of evidence that vaccination, of any type, causes autism. There is also absolutely no shred of scientific evidence about either vaccination or autism suggesting any possible mechanism that could be responsible for such an association.

The whole story about MMR vaccination and autism was concocted and promulgated fraudulently, as reported in the most comprehensive, in-depth, precisely detailed and documented investigation by Brian Deer, an eminent prize-winning journalist. Unfortunately, the impact was greatly magnified and perpetuated by the egregious conduct of the formerly reputable British medical publication The Lancet, which behaved disgracefully badly in this matter. Also, very sadly, the regrettable conflation of association and causality, led many otherwise well-meaning non-scientific and non-medical people in the general population, to accept the false connection and to promote it. This happened despite the irrefutable fact that the purported association between vaccination and autism did not and does not exist, let alone any causal relationship between them.

Most tragically, the reduction in uptake of MMR vaccination resulting from the Wakefield scandal has directly caused the well-documented sickness, maiming and death of thousands of children from measles, and continues to do so up to the present. Outbreaks of measles causing severe illness and some deaths continue to occur in the developed world while, catastrophically, in the developing world the lethal consequences of insufficient MMR vaccination are even more severe.

READ MORE

Health Feedback explained in an Insight article how we know that vaccines don't cause autism.

Learn more about vaccine safety at the Vaccine Safety Communication eLibrary, maintained by the World Health Organization's Vaccine Safety Net.

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Autism Vaccine

Published on: 11 Mar 2020 | Editor: Flora Teoh

Science Feedback is a non-partisan, non-profit organization dedicated to science education. Our reviews are crowdsourced directly from a community of scientists with relevant expertise. We strive to explain whether and why information is or is not consistent with the science and to help readers know which news to trust.
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Gates (April 9, 2020)

CHD Article:

https://childrenshealthdefense.org/news/government-corruption/gates-globalist-vaccine-agenda-a-win-win-for-pharma-and-mandatory-vaccination/

Correctiv Fact Check Article (in German as linked):

https://correctiv.org/faktencheck/2017/04/18/bill-gates-soll-gesagt-haben-impfen-ist-die-beste-art-der-bevoelkerungsreduktion-stimmt-das/

April 09, 2020

Gates' Globalist Vaccine Agenda: A Win-Win for Pharma and Mandatory Vaccination

By Robert F. Kennedy Jr., Chairman, Children's Health Defense

Vaccines, for Bill Gates, are a strategic philanthropy that feed his many vaccine-related businesses (including Microsoft's ambition to control a global vaccination ID enterprise) and give him dictatorial control of global health policy.

Gates' obsession with vaccines seems to be fueled by a conviction to save the world with technology.

Promising his share of $450 million of $1.2 billion to eradicate polio, Gates took control of India's National Technical Advisory Group on Immunization (NTAGI), which mandated up to 50 doses (Table 1) of polio vaccines through overlapping immunization programs to children before the age of five. Indian doctors blame the Gates campaign for a devastating non-polio acute flaccid paralysis (NPAFP) epidemic that paralyzed 490,000 children beyond expected rates between 2000 and 2017. In 2017, the Indian government dialed back Gates' vaccine regimen and asked Gates and his vaccine policies to leave India. NPAFP rates dropped precipitously.

The most frightening [polio] epidemics in Congo, Afghanistan, and the Philippines are all linked to vaccines.

In 2017, the World Health Organization (WHO) reluctantly admitted that the global explosion in polio is predominantly vaccine strain. The most frightening epidemics in Congo, Afghanistan, and the Philippines, are all linked to vaccines. In fact, by 2018, 70% of global polio cases were vaccine strain.

In 2009, the Gates Foundation funded tests of experimental HPV vaccines, developed by Glaxo Smith Kline (GSK) and Merck, on 23,000 young girls in remote Indian provinces. Approximately 1,200 suffered severe side effects, including autoimmune and fertility disorders. Seven died. Indian government investigations charged that Gates-funded researchers committed pervasive ethical violations: pressuring vulnerable village girls into the trial, bullying parents, forging consent forms, and refusing medical care to the injured girls. The case is now in the country's Supreme Court.

South African newspapers complained, 'We are guinea pigs for the drug makers.'

In 2010, the Gates Foundation funded a phase 3 trial of GSK's experimental malaria vaccine, killing 151 African infants and causing serious adverse effects, including paralysis, seizure, and febrile convulsions, to 1,048 of the 5,949 children.

During Gates' 2002 MenAfriVac campaign in Sub-Saharan Africa, Gates' operatives forcibly vaccinated thousands of African children against meningitis. In the village of Gouro, located in northern Chad, approximately 50 of the 500 children vaccinated developed paralysis. South African newspapers complained, "We are guinea pigs for the drug makers." Nelson Mandela's former senior economist, Professor Patrick Bond, describes Gates' philanthropic practices as "ruthless and immoral."

In 2010, when Gates committed $10 billion to the WHO, he said "We must make this the decade of vaccines." A month later, Gates said in a TED Talk that new vaccines "could reduce population." And, four years later, in 2014, Kenya's Catholic Doctors Association accused the WHO of chemically sterilizing millions of unwilling Kenyan women with a "tetanus" vaccine campaign. Independent labs found a sterility formula in every vaccine tested. After denying the charges, WHO finally admitted it had been developing the sterility vaccines for over a decade. Similar accusations came from Tanzania, Nicaragua, Mexico, and the Philippines.

A 2017 study (Morgenson et. al. 2017) showed that WHO's popular DTP vaccine is killing more African children than the diseases it prevents. DTP-vaccinated girls suffered 10x the death rate of children who had not yet received the vaccine. WHO has refused to recall the lethal vaccine, which it forces upon tens of millions of African children annually.

[Global public health officials] say he has diverted agency resources to serve his personal philosophy that good health only comes in a syringe.

Global public health advocates around the world accuse Gates of steering WHO's agenda away from the projects that are proven to curb infectious diseases: clean water, hygiene, nutrition, and economic development. The Gates Foundation spends only about $650 million of its $5 billion dollar budget on these areas. They say he has diverted agency resources to serve his personal philosophy that good health only comes in a syringe.

In addition to using his philanthropy to control WHO, UNICEF, GAVI, and PATH, Gates funds a private pharmaceutical company that manufactures vaccines and is donating $50 million to 12 pharmaceutical companies to speed up development of a coronavirus vaccine. In his recent media appearances, Gates appears confident that the Covid-19 crisis will now give him the opportunity to force his dictatorial vaccine programs on all American children – and adults.

FAKTENCHECK

Bill Gates soll gesagt haben: „Impfen ist die beste Art der Bevölkerungsreduktion.“ Stimmt das?

Mehrere Websites behaupten: Der ehemalige Microsoft-Chef Bill Gates halte Impfungen für einen guten Weg zur Verringerung der Weltbevölkerung. Als Beleg dafür wird ein TED Talk von Bill Gates aus dem Jahre 2010 angeführt. Was ist dran an dieser Behauptung?

von Karolin Schwarz

18. April 2017

Auf engstem Raum: Urnenfriedhof in Japan© Luís Alvoeiro Quaresma/unsplash.com

BEWERTUNG

FALSCH

Über diese Bewertung

irreführend und falsch

Auf der Website Pravda TV heißt es:

„Bill Gates gibt offen zu, dass die Impfstoffe der Bevölkerungsreduktion dienen. Ihm zufolge müssen täglich 350.000 Menschen beseitigt werden, um die Population stabil zu halten. Er erklärt, wie wir alle einer „Menschentötungsstrategie" zustimmen müssen, um den Planeten vor unserem Kohlendioxid-Ausstoß zu retten. Jeder kann sich selbst davon überzeugen, dass er das wirklich gesagt hat"

Pravda TV wird von Nikolas Pravda betrieben. Auf der Website werden unter anderem gängige Verschwörungstheorien aufgegriffen. Den Artikel hat die Website Basel Express ebenfalls veröffentlicht. Im Vortrag von 2010 – das eigentliche Thema ist der menschliche CO2-Ausstoß – sagt Gates Folgendes:

„Zuerst haben wir die Bevölkerung. Heute leben 6,8 Milliarden Menschen auf der Welt. Es geht auf etwa 9 Milliarden zu. Wenn wir sehr erfolgreich mit neuen Impfstoffen, der Gesundheitsversorgung und Reproduktionsmedizin sind könnten wir das wohl um 10% bis 15% senken, aber zur Zeit sehen wir eine Steigung um 1,3." (Originalzitat siehe unten)

Eine Quelle für die Behauptung, täglich müssten „350.000 Menschen beseitigt werden", gibt es nicht. Legt man die Zahlen aus dem Vortrag zugrunde, spricht Gates über eine Entwicklung der Weltbevölkerung von 6,8 auf 9 Milliarden Menschen. Das entspricht einem Wachstum von 2,2 Milliarden. Er bezieht sich dabei vermutlich auf die Vereinten Nationen, die 2009 ein solches Wachstum bis ins Jahr 2050 prognostizierten. Gates sagt, durch Impfungen, das Gesundheitswesen und reproduktive Gesundheitsfürsorge könne dieses Wachstum um 10-15% (220 – 330 Millionen) verringert werden. Laut Pravda TV „müssen täglich 350.000 Menschen beseitigt werden, um die Population stabil zu halten". Offensichtlich handelt es sich dabei um eine Zahl, die völlig aus der Luft gegriffen ist: bei 350.000 Menschen pro Tag wäre die Zahl von 330 Millionen innerhalb von 943 Tagen erreicht, also innerhalb von etwa zweieinhalb Jahren. Bill Gates selbst nennt diese Zahl innerhalb seines Vortrags an keiner Stelle.

Von einer „Beseitigung“ von Menschen ist zudem an keiner Stelle innerhalb des Vortrags die Rede. Die US-Factchecking-Website Snopes.com zitiert in diesem Zusammenhang ein Schreiben der Bill and Melinda Gates Foundation:

„Eine überraschende Erkenntnis war für uns, dass die Verringerung der Zahl der Todesfälle das Bevölkerungswachstum reduziert. […] Im Gegensatz zur malthusianischen Sichtweise, dass die Bevölkerung wächst, solang Kinder ernährt werden können, bekommen Eltern tatsächlich so viele Kinder, dass die Chancen hoch genug sind, dass einige von ihnen überleben, um sie im Alter zu unterstützen. Wächst die Zahl der Kinder, die das Erwachsenenalter erreichen, können Eltern dieses Ziel erreichen, ohne so viele Kinder zu bekommen.“ (Originalzitat siehe unten)

Auf der Website de Bill and Melinda Gates Foundation heißt es, ihre Impfkampagne wolle „mehr als 11 Millionen Todesfälle, 3,9 Millionen Fälle von Behinderung und 264 Millionen Krankheiten bis 2020 verhindern, durch einen hohen, gerechten und nachhaltigen Impferfassungsgrad“ (Originalzitat siehe unten).

Fazit

Erklärtes Ziel von Bill Gates ist, Kinder am Leben zu erhalten und Kindersterblichkeit zu bekämpfen. Der Artikel bei Pravda TV hingegen suggeriert das Gegenteil: Dass Gates Impfungen als eine „Menschentötungsstrategie“ einsetze. Pravda TV reißt das Zitat aus dem Zusammenhang und entstellt es dadurch. Die Behauptungen im Artikel sind irreführend und falsch.

Quellen

- Originalzitat Bill Gates, 2010: „First, we’ve got population. The world today has 6.8 billion people. That’s headed up to about nine billion.Now, if we do a really great job on new vaccines, health care, reproductive health services, we could lower that by, perhaps, 10 or 15 percent. But there, we see an increase of about 1.3.“
- Originalzitat Bill and Melinda Gates Foundation, 2009: „A surprising but critical fact we learned was that reducing the number of deaths actually reduces population growth. […] Contrary to the Malthusian view that population will grow to the limit of however many kids can be fed, in fact parents choose to have enough kids to give them a high chance that several will survive to support

them as they grow old. As the number of kids who survive to adulthood goes up, parents can achieve this goal without having as many children."

- Originalzitat Bill and Melinda Gates Foundation: „to prevent more than 11 million deaths, 3.9 million disabilities, and 264 million illnesses by 2020 through high, equitable, and sustainable vaccine coverage"

Flu Vaccine (April 14, 2020)

Original Article that was linked by CHD:

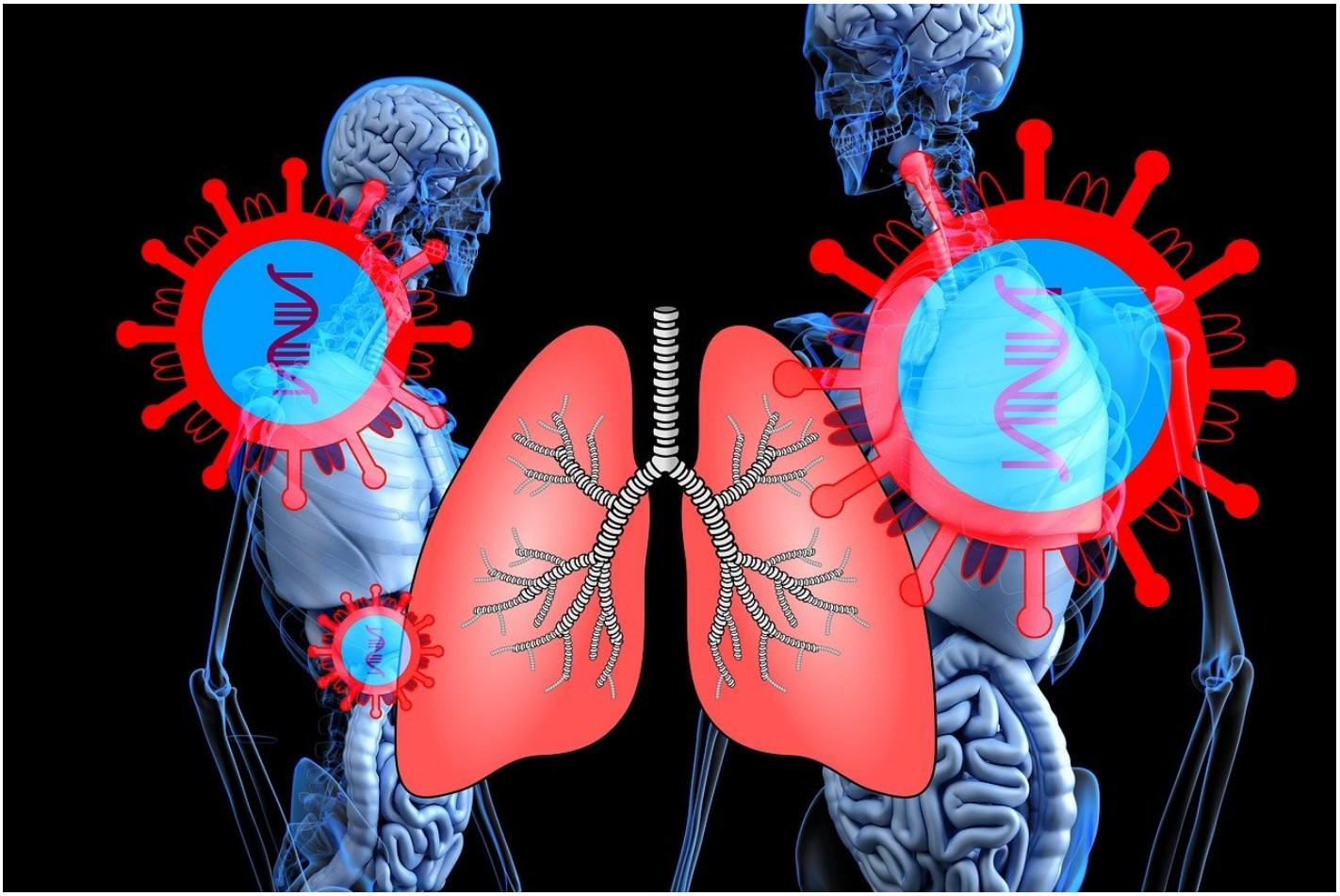
https://www.newsbreak.com/news/1548442204972/new-study-the-flu-vaccine-is-significantly-associated-with-an-increased-risk-of-coronavirus

Politifact Article:

https://www.politifact.com/factchecks/2020/jul/16/facebook-posts/2017-18-flu-season-study-does-not-include-covid-19/

Study: The Flu Vaccine Is "Significantly Associated" With An Increased Risk of Coronaviruses – Not COVID-19

Published **7 months ago** on Apr .020
By **Arjun Walia**



IN BRIEF

The Facts: A study published in the journal Vaccine found a greater risk of contracting coronavirus among individuals in the study who received the influenza vaccine. This does not refer to COVID 19, but to already circulating coronaviruses.

Reflect On: Are vaccines completely and 100 percent safe for everybody? Is there a large minority who are more susceptible to vaccine injury and complications compared to others?

Greg. G Wolff, an Epidemiologist with the Armed Forces Health Surveillance Branch recently published a study in the Journal *Vaccine* titled, *Influenza vaccination and respiratory virus interference among Department of Defense personnel during the 2017–2018 influenza season.* The study examined virus interference in a Department of Defense population, this refers to the increased risk of other respiratory viruses as a result of, in this case, the influenza vaccine. The study found that virus interference varied among vaccinated individuals for individual respiratory viruses, and found that for coronaviruses in particular, in this study, those who had been vaccinated with the flu vaccine had a ***36 percent higher risk*** of contracting them. This doesn't apply to the new coronavirus, but instead already existing circulating coronaviruses.

The study also states that "The overall results of the study showed little to no evidence supporting the association of virus interference and influenza vaccination" and that more research is needed.

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censorship and the attack on free speech. Click here to help!

As far as Covid19, it's a coronavirus but it has not been studied, obviously, so as of now it's impossible to say that the flu shot would do this for Covid-19.

The study compared the vaccination status of more than two thousand people with non-influenza respiratory viruses to more than three thousand people with pan-negative results. The vaccination status of more than three thousand cases of influenza were compared to three different control groups, and appropriate adjustments were made.

The study points out that recently published studies have "described the phenomenon of vaccine-associated virus interference; that is, vaccinated individuals may be at increased risk for other respiratory viruses because they do not receive the non-specific immunity associated with natural infection." The study goes on to emphasize that "There has been limited evidence that the influenza vaccine may actually be associated with the virus interference process. Other studies have found no association between influenza vaccination and increased respiratory virus risk."

Other studies have found no association between the flu vaccine and an increased risk for other respiratory viruses, but when looking specifically at coronavirus, Wolff's study found that "Vaccine derived virus interference was significantly associated with coronavirus and human metapneumovirus; however, significant protection with vaccination was associated not only with most influenza viruses, but also parainfluenza, RSV, and non-influenza virus coinfections."

Metapneumovirus causes both upper and lower respiratory disease in all ages.

Out of the 6120 people in the study with respiratory viruses other than influenza, those who received an influenza vaccine actually had a decreased risk of having other respiratory pathogens compared to the unvaccinated group. Again, it's important to be specific with what respiratory pathogens one may have an increased risk of contracting as a result of

being vaccinated against influenza. This is why for some pathogens, no increased risk was observed, and in some cases a decreased risk was observed. But again, specifically for coronavirus, a significant increased risk was observed.

With regards to the coronavirus and human metapneumovirus, the data in this study showed an increased risk of contraction within vaccinated individuals to be 36 percent greater.

> *The laboratory data in our study showed increased odds of coronavirus and human metapneumovirus in individuals receiving influenza vaccination…In our disease specific investigation, virus interference trends were noticed for coronavirus and human metapneumovirus…Examining non-influenza viruses specifically, the odds of both coronavirus and human metapneumovirus in vaccinated individuals were* ***significantly higher when compared to unvaccinated individuals (OR = 1.36 and 1.51, respectively)***

The study concluded that:

> *Receipt of influenza vaccination was not associated with virus interference among our population. Examining virus interference by specific respiratory viruses showed mixed results. Vaccine derived virus interference was significantly associated with coronavirus and human metapneumovirus; however, significant protection with vaccination was associated not only with most influenza viruses, but also parainfluenza, RSV, and non-influenza virus coinfections.*

But overall, the results showed “little to no evidence supporting the association of virus interference and influenza vaccination.”

Furthermore, a study published in the same journal, *Vaccine,* found that“Among children there was an increase in the hazard of ARI (acute respiratory illness) caused by non-influenza respiratory pathogens post-influenza vaccination compared to unvaccinated children during the same period…Patient perceptions of illness following influenza vaccination may be supported.”

The Department of Defense has a Global Respiratory Pathogen Surveillance Program (DoDGRS), it's a DoD-wide program established by the Global Emerging Infections Surveillance and Response System (GEIS). This is how Wolff was able to gather all of his data with regards to who had been vaccinated with the influenza virus, and what other illnesses they experienced. The Defense Health Agency/Armed Forces Health Surveillance Branch – Air Force Satellite Cell (DHA/AFHSB – AF) and United States Air Force School of Aerospace Medicine (USAFSAM) also provided access to the data.

Further Thoughts About Flu Vaccination

According to the study above, "significant protection with vaccination was associated not only with most influenza viruses, but also parainfluenza, RSV, and non-influenza virus coinfections." So, it does point out the benefits of influenza and suggests it's effective. It also sites multiple studies that show it's effective as well.

But there is conflicting research on the the flu vaccine and its effectiveness against influenza. For example, Dr. Peter Doshi is an associate editor at *The BMJ (British Medical Journal)* and also an assistant professor of pharmaceutical health services research at the University of Maryland School of Pharmacy, published a paper in *The BMJ* titled "*Influenza: Marketing Vaccines By Marketing Disease."* In it, he points out that the

CDC pledges "to base all public health decisions on the highest quality of scientific data, openly and objectively derived," and how this isn't the case when it comes to the flu vaccine and its marketing. He stresses that "the vaccine may be less beneficial and less safe than has been claimed, and that "the threat of influenza seems to be overstated."

He goes on to state:

> *But perhaps the cleverest aspect of the influenza marketing strategy surrounds the claim that "flu" and "influenza" are the same. The distinction seems subtle, and purely semantic. But general lack of awareness of the difference might be the primary reason few people realize that even the ideal influenza vaccine, matched perfectly to circulating strains of wild influenza and capable of stopping all influenza viruses, can only deal with a small part of the "flu" problem because most "flu" appears to have nothing to do with influenza. Every year, hundreds of thousands of respiratory specimens are tested across the US. Of those tested, on average 16% are found to be influenza positive. (fig 2).⇓ All influenza is "flu," but only one in six "flus" might be influenza. It's no wonder so many people feel that "flu shots" don't work: for most flus, they can't.*

Dr. Alvin Moss, MD and professor at the West Virginia University School of Medicine emphasizes in this video:

> *The flu vaccine happens to be the vaccine that causes the most injury in this country. The vaccine injury compensation program, 40 percent of all vaccinations in this country are flu shots, but 60 percent of all the compensations are for the flu vaccine. So a disproportionate number of vaccine related injuries are the flu shot. I think many of you it's been recommended to you that you get the flu shot, I don't know if you're aware of the fact, the CDC statistics are, that every year they look at vaccine effectiveness, for this particular year the vaccine effectiveness is 48 percent, so that means it's not highly effective. It's not even all that effective, if you look at the scientific literature…the evidence to support giving the flu vaccine is moderate to weak. It is not strong evidence. They say the evidence to support giving the flu vaccine to people over the age of 65 is not there, it's inconclusive. So a lot of the things we've been told as Americans about vaccinations are not really based on the science. (source)*

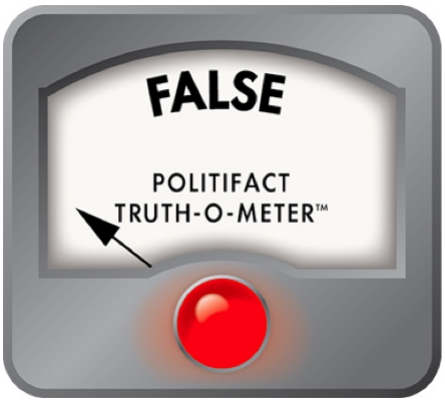
The National Childhood Vaccine Injury (NCVIA) has already paid out approximately $4 billion to compensate families of vaccine injured children. As astronomical as the monetary awards are, they're even more alarming

considering HHS claims that only an estimated 1% of vaccine injuries are even reported to the Vaccine Adverse Events Reporting System (VAERS).

Something to think about. The information in this article shows that's it's ok to question, and that the science on vaccine safety is not 'settled.' We must ask ourselves, why are there terms like 'anti-vax' and why does big media constantly try to ridicule any information that paints vaccines in a concerning light? Surely the questioning of vaccine safety is in the best interest of all parties involved?

At the end of the day, it's not about who is right and who is wrong, and it's not about one side or the other. It's about coming together in a peaceful manner and understanding the concerns that are being raised, and dealing with them, addressing, and responding to them appropriately. We cannot hold hate in our own being if we want to rid the world of it, and we cannot use ridicule and judgement against, otherwise we are simply perpetuating what we are trying to get rid of. Operating from a place of peace is essential, it helps to see things in a clearer way, and it's something that needs to become a necessity for all parties involved, whether you support vaccination or do not.

Facebook posts
stated on April 16, 2020 in a media website:
"New study: The flu vaccine is
'significantly associated' with
an increased risk of coronavirus"



- Public Health
- Facebook Fact-checks
- Coronavirus

This Jan. 23, 2020 file photo shows a patient receiving a flu vaccination in Mesquite, Texas. (AP Photo)

By Emily Venezky July 16, 2020

This 2017-18 flu season study does not include COVID-19

If Your Time is short

- The study featured in the article is from 2019 and the data for it was collected in 2017-18, so it doesn't include COVID-19 information.
- In past fact-checks, experts said this connection between the flu vaccine and other viruses is still speculative.

See the sources for this fact-check

We have debunked plenty of misinformation about vaccines for COVID-19 that are in development. Next up: more false information tying COVID-19 to the seasonal flu vaccine.

An April 16 article shared on social media carries the headline "New study: The flu vaccine Is 'significantly associated' with an increased risk of coronavirus."

Facebook flagged this story as part of its efforts to combat false news and misinformation on Facebook's News Feed. (Read more about our partnership with Facebook.)

The article, from a self-described "conscious media" website, mainly cites a 2019 study from the U.S. Armed Forces Health Surveillance Branch that was published in the journal Vaccine in 2020. The study focused on Department of Defense personnel, who have high rates of flu vaccination, and examined whether being vaccinated for a seasonal flu could make someone more or less likely to catch other respiratory viruses.

But the study found no connection between the flu shot and an increased risk of contracting COVID-19.

That’s because the U.S. Armed Forces study’s data was referring to seasonal common coronaviruses in 2017-18, not the new coronavirus that causes COVID-19. (There are seven types of coronaviruses that can infect humans, of which the COVID-19-causing SARS-CoV-2 is one.) This was clarified in the full article, but is ambiguous in the headline.

What’s more, Richard Watanabe, a preventative medicine professor at USC, told PolitiFact that the article doesn’t really provide "strong support for anything they are

claiming" since the study found little correlation between the flu vaccine and such viruses.

Even with regard to coronaviruses that predated SARS-CoV-2, the U.S. Armed Forces study concluded that further research is needed, as "the overall results of the study showed little to no evidence supporting the association of virus interference and influenza vaccination." The study's data had mixed results for individual respiratory viruses and found that vaccinated individuals were "more likely to have no pathogen detected and reduced risk of influenza when compared to unvaccinated individuals."

The article also leaves out parts of the study that question the data linking coronavirus cases to the influenza vaccine. For instance, the U.S. Armed Forces study referenced a study from 2013 that had similar results except there was "no association between influenza vaccination and RSV, adenovirus, human metapneumovirus, rhinovirus or coronavirus."

Edward Belongia, an infectious disease epidemiologist who worked on the 2013 study, explained to FactCheck.org that there is little scientific data to support the speculative theory of the flu vaccine increasing the risk of other respiratory viruses.

While this article did specify that the U.S. Armed Forces study was testing common coronaviruses and not COVID-19, the headline was ambiguous and misleading. We rate this headline False.

Our Sources

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Dr. Luc Montagnier (April 16, 2020)

Linked Article:

https://thejewishvoice.com/2020/04/2008-nobel-prize-for-medicine-winning-dr-luc-montagnier-says-covid-19-was-manipulated-for-hiv-research/

Science Feedback Fact Check

https://healthfeedback.org/claimreview/claim-by-nobel-laureate-luc-montagnier-that-the-novel-coronavirus-is-man-made-and-contains-genetic-material-from-hiv-is-inaccurate/

2008 Nobel Prize for Medicine Winning Dr Luc Montagnier Says Covid-19 was "manipulated" for HIV Research

According to Professor Luc Montagnier, winner of the Nobel Prize for Medicine in 2008 for "discovering" HIV as the cause of the AIDS epidemic together with Françoise Barré-Sinoussi, the SARS-CoV-2 responsible for the Covid-19 pandemic is a virus that was manipulated and accidentally released from a laboratory in Wuhan, China, in the last quarter of 2019. According to Professor Montagnier, this laboratory, known for its work on coronaviruses, tried to use one of these viruses as a vector for HIV in the search for an AIDS vaccine, Gilmore Health reported after Montagnier was interviewed on a medical podcast.

Dr Luc Montagnier discovered the HIV virus back in 1983.

"With my colleague, bio-mathematician Jean-Claude Perez, we carefully analyzed the description of the genome of this RNA virus," explains Luc Montagnier, interviewed by Dr Jean-François Lemoine for the daily podcast at Pourquoi Docteur, adding that others have already explored this avenue: Indian researchers have already tried to publish the results of the analyses that showed that this coronavirus genome contained sequences of another virus, … the HIV virus (AIDS virus), but they were forced to withdraw their findings as the pressure from the mainstream was too great.

In a challenging question Dr Jean-François Lemoine inferred that the coronavirus under investigation may have come from a patient who is otherwise infected with HIV. No, "says Luc Montagnier," in order to insert an HIV sequence into this genome, molecular tools are needed, and that can only be done in a laboratory.

The good news is : according to Montagnier "Nature does not accept any molecular tinkering, it will eliminate these unnatural changes and even if nothing is done, things will get better, but unfortunately after many deaths."

You can listen to the podcast here, it is in French

Every day it is becoming clearer that COVID-19 came from the laboratory in Wuhan. You must put aside the wild conspiracy theories that this was a "bio weapon released on purpose" that is unproven speculation. It seems totally credible that this virus somehow escaped from the lab and did not come from bats in a "wet market"

The Jewish Voice is not a "conspiracy" website or newspaper, Luc Montagnier's claims are the most credible yet in regards to the origin of Coronavirus.

Nobel laureate Luc Montagnier inaccurately claims that the novel coronavirus is man-made and contains genetic material from HIV

CLAIM

this coronavirus genome contained sequences of another virus […] the HIV virus (AIDS virus)

VERDICT

INACCURATE

DETAILS

Inaccurate: Genomic analyses indicate that the virus has a natural origin, and was not engineered. The so-called “unique” protein sequence insertions found in the 2019 novel coronavirus can be found in many other organisms, not just HIV.

KEY TAKE AWAY

Genomic analyses of the novel coronavirus show that it was not engineered. In addition, the claim that its genome contains inserted HIV sequences is based on a now-withdrawn preprint of a study that contained significant flaws in design and execution. The so-called “HIV insertions” identified by the authors are in fact gene sequences that can also be found in many other organisms besides HIV.

FULL CLAIM: this coronavirus genome contained sequences of another virus […] the HIV virus (AIDS virus)

REVIEW

Numerous articles published in April 2020 report that Nobel laureate Luc Montagnier claimed that "SARS-CoV-2 is a manipulated virus that was accidentally released from a laboratory in Wuhan, China" and that "Indian researchers have already tried to publish the results of the analyses that showed that this coronavirus genome contained sequences of another virus […] the HIV virus (AIDS virus)." The claim that SARS-CoV-2 contains "HIV insertions" began circulating in January 2020, and was propagated by outlets such as Zero Hedge and Infowars. Health Feedback covered this claim in early February 2020, and found it to be inaccurate.

Firstly, genomic analysis of the novel coronavirus, published in Nature Medicine, has demonstrated that the virus is not the product of bioengineering, but is rather of natural origin[1]. The current most likely theory, based on what scientists know about viral evolution, is that the virus first emerged in pangolins or bats (or both) and later developed the ability to infect humans. This ability to infect human cells is conferred by the so-called spike (S) protein, which is located on the surface of the enveloping membrane of SARS-CoV-2.

After the 2003-2005 SARS outbreak, researchers identified a set of key amino acids within the S protein which give SARS-CoV-1 a super-affinity for the ACE2 target receptor located on the surface of human cells[2,3]. Surprisingly, the S protein of the current SARS-CoV-2 does not contain this optimal set of amino acids[1], yet is nonetheless able to bind ACE2 with a greater affinity than SARS-CoV-1[4]. This finding suggests that SARS-CoV-2 evolved independently and undermines the claim that it was manmade[1]. Indeed, the best engineering strategy would have been to harness the known and efficient amino acid sequences already described in SARS-CoV-1 order to produce a more optimal molecular design for SARS-CoV-2. The authors of the Nature Medicine study[1] concluded that "Our analyses clearly show that SARS-CoV-2 is not a laboratory construct or a purposefully manipulated virus."

Secondly, the claim that SARS-CoV-2 contains HIV insertions is based on a preprint of a research study uploaded to bioRxiv on 2 February 2020. A preprint is a study in progress that has not been peer-reviewed by other scientists. The authors of the preprint, titled "Uncanny similarity of unique inserts in the 2019-nCoV spike protein to HIV-1 gp120 and Gag", claimed to have found "4 insertions in the spike glycoprotein (S) which are unique to 2019-nCoV and are not present in other coronaviruses". The authors further asserted that "all of [these inserts] have identity/similarity to amino acids residues in key structural proteins of HIV-1 [which] is unlikely to be fortuitous in nature".

The work was swiftly criticized by experts. In this Forbes article, Arinjay Banerjee, a postdoctoral fellow at McMaster University who has studied coronaviruses, said that:

> "*The authors compared very short regions of proteins in the novel coronavirus and concluded that the small segments of proteins were similar to segments in HIV proteins. Comparing very short segments can often generate false positives and it is difficult to make these conclusions using small protein segments.*"

Researchers also took to Twitter to demonstrate this problem first-hand. Trevor Bedford, a faculty member at the Fred Hutchinson Cancer Research Center who studies viral evolution, re-analyzed the gene and protein sequences used by the authors and found that the so-called "unique" inserts appeared in many other organisms, including *Cryptosporidium* and *Plasmodium malariae*, which cause cryptosporidiosis and malaria, respectively.

Assistant professor at Stanford University Silvana Konermann also checked the authors' findings and came to the same conclusion, calling the similarity "spurious".

This has also been independently confirmed in another published analysis[5]. In other words, these sequences are not insertions, but are rather common sequences found in numerous other organisms such as bacteria and parasites. Therefore, the existence of these sequences in SARS-CoV-2 does not provide evidence of a link to HIV, nor that scientists purposely inserted HIV sequences into the SARS-CoV-2 genome.

In summary, genomic analysis of the virus indicates that it does not contain so-called “HIV insertions” and that it was not engineered in a lab. Evidence points to the virus having a natural origin.

The only thing accurate about these articles is that Nobel Prize winner and virologist Luc Montagnier did in fact make these claims. Although he holds impressive scientific credentials, his claims run contrary to credible scientific evidence. And despite having won the Nobel Prize in Physiology or Medicine in 2008 for his co-discovery of the link between HIV and AIDS, Montagnier now promotes widely discredited theories such as the pseudoscience of homeopathy and that autism is caused by bacteria that emit electromagnetic waves. Articles which repeat Montagnier’s claims without critically evaluating their veracity exhibit the common “appeal to authority” fallacy, in which something is assumed to be true simply because the person saying it is considered to be an expert, thereby misleading readers into believing that this theory is scientifically credible. This demonstrates the importance of verifying scientific claims with other experts in the same field, rather than simply taking such claims from a single expert at face value.

SCIENTISTS’ FEEDBACK

[These comments come from an evaluation of a related claim.]
Aaron T. Irving, Senior Research Fellow, Duke-NUS Medical School:
It’s easier to believe misinformation when it is mixed with truth. The region highlighted in the pre-print is indeed an insertion in nCoV-2019 relative to its bat ancestors and indeed it has high identity to the HIV gp120/gag. However, the authors chose to align only this small region and not do a basic check on whether there were other sequences which were also homologous (showing high degree of similarity/identity). As it turned out, the region is also homologous to many unrelated sequences. As such, the conclusions drawn from the data are no longer valid and there are many open-ended questions regarding this region highlighted. I see the authors themselves agree with this criticism by other scientists and have voluntarily withdrawn their preprint pending a much deeper investigation.

READ MORE

The author of this article by European Scientist also compared the genome sequences of SARS-CoV-2 and HIV using the Basic Local Alignment Search Tool (BLAST), developed by the U.S. National Institutes of Health, and found “no significant similarity”, explaining that “In plain English, SARS-CoV-2 is not made of the bat coronavirus and small bits of the HIV virus.” Readers who wish to verify the level of sequence identity between the two viruses for themselves are welcome to follow the steps listed in the article.

Several competing hypotheses have been proposed to explain where the novel coronavirus actually came from. Health Feedback investigated the three most widespread origin stories for the novel coronavirus (engineered, lab-leak or natural infection), and examined the evidence for or against each proposed hypothesis in this Insight article.

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- 5 – Xiao et al. (2020) HIV-1 Did Not Contribute to the 2019-nCoV Genome. Emerging Microbes and Infections.

Coronavirus COVID-19 HIV

Published on: 20 Apr 2020 | Editor: Flora Teoh

Health Feedback is a non-partisan, non-profit organization dedicated to science education. Our reviews are crowdsourced directly from a community of scientists with relevant expertise. We strive to explain whether and why information is or is not consistent with the science and to help readers know which news to trust.
Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

Brian Hooker's Study (May 28, 2020)

Original Article:

https://childrenshealthdefense.org/news/new-research-study-clarifies-health-outcomes-in-vaccinated-versus-unvaccinated-children/

Science Feedback Fact Check Article:

https://sciencefeedback.co/claimreview/significant-methodological-flaws-in-a-2020-study-claiming-to-show-unvaccinated-children-are-healthier-brian-hooker-childrens-health-defense/

Brian Hooker's Rebuttal to Science Feedback:

https://childrenshealthdefense.org/news/fact-checking-the-facebook-fact-checkers/

MAY 28, 2020

New Research Study Clarifies Health Outcomes in Vaccinated versus Unvaccinated Children


Original Article

SAGE Open Medicine

Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders

SAGE Open Medicine
Volume 8: 1–11
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DOI: 10.1177/2050312120925344
journals.sagepub.com/home/smo
SAGE

Conclusion

In this study, based on a convenience sample of children born into one of three distinct pediatric medical practices, higher ORs were observed within the vaccinated versus unvaccinated group for developmental delays, asthma and ear infections.

FOR IMMEDIATE RELEASE – May 28, 2020

Contact:

Brian Hooker, Ph.D.
Children's Health Defense
(509) 366-2269

Unvaccinated children are less likely to be diagnosed with developmental delays, asthma, and ear infections.

Redding CA— A new peer-reviewed study in the journal *SAGE Open Medicine* details the health outcomes of vaccinated versus unvaccinated children

from three pediatric practices in the United States concludes that unvaccinated children have better health outcomes than their vaccinated peers.

Children in the study were followed continuously for a minimum of 3 years from birth. The study was based on medical records of over 2000 children enrolled in three pediatric practices and born between November 2005 and June 2015. Vaccination status was determined based on any vaccination received prior to one year of age which yielded 30.9% of the children in the unvaccinated group. Results show that vaccination before one year of age led to significantly increased odds of medical diagnoses of developmental delays, asthma and ear infections in children.

In a separate analysis, based on the number of vaccines received by one year of age, children receiving more vaccines were more likely to be diagnosed with gastrointestinal disorders compared to those who received no vaccines within the same timeframe. In temporal analyses, children vaccinated prior to six months of age showed significant risks of each of the disorders studied as compared to unvaccinated children in the same timeframe.

The study, coauthored by Dr. Brian Hooker and Mr. Neil Miller, is unique in that all diagnoses were verified using abstracted medical records from each of the participating pediatric practices. Lead author of the study, Dr. Hooker, stated, "The results definitely indicate better health outcomes in children who did not receive vaccines within their first year of life. These findings are consistent with additional research that has identified vaccination as a risk factor for a variety of adverse health outcomes. Such findings merit additional large-scale study of vaccinated and unvaccinated children in order to provide optimal health as well as protection against infectious diseases."

Children's Health Defense (CHD) has assembled nearly 60 studies that find vaccinated cohorts to be far sicker than their unvaccinated peers. CHD is a non-profit organization dedicated to ending the recent epidemic of chronic health conditions affecting 54% of children. The organization recognizes a variety of harmful environmental exposures contributing to an overall decline in children's health.

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Significant methodological flaws in a 2020 study claiming to show unvaccinated children are healthier

CLAIM

Vaccinated children are more likely to have adverse health outcomes like developmental delays, asthma, and ear infections compared to unvaccinated children.

VERDICT

UNSUPPORTED

DETAILS

Inadequate support: This claim is based on a single study which used highly biased methods. Rigorous and large-scale studies have not found a greater likelihood of adverse health outcomes in vaccinated children.
Misleading: The claim is based on a study which used questionable methods of selecting a study population and which failed to control for confounding factors in its comparison of vaccinated and unvaccinated children.

KEY TAKE AWAY

Large-scale, reputable studies have not found a greater incidence of adverse health outcomes in vaccinated children compared to unvaccinated children. A significant problem with the single study cited in this claim is its failure to control for differences between vaccinated and unvaccinated children, such as healthcare-seeking behavior, which can factor into health outcomes. Furthermore, the study used patient data from handpicked pediatric clinics only, which are not representative of the general population.

FULL CLAIM: Vaccinated children are more likely to have adverse health outcomes like developmental delays, asthma, and ear infections compared to unvaccinated children.

SUMMARY

A study published on 28 May 2020[1] has been used to support a claim shared in articles and social media posts on Facebook and Instagram that unvaccinated children are healthier than vaccinated children. As is typical for this type of claim, the posts have most commonly been shared by Facebook groups that oppose vaccines, but also by groups that promote conspiracy theories.

This claim is not new. A study by Mawson *et al.* in 2017 was used similarly by vaccine skeptics. Snopes found that study to be fraught with methodological problems and flawed statistical analyses which invalidated its conclusions.

The 2020 study examined the medical records of patients from three pediatric practices as a "convenience sample", selecting records with diagnoses of developmental delay, asthma, ear infection, and gastrointestinal disorder. The study authors did not clearly describe how these pediatric practices were selected. They then compared the number of vaccinated children who had received any of the four diagnoses to the number of unvaccinated children, and concluded that vaccination is associated with a higher incidence of developmental delays, asthma, and ear infections. As a control, a diagnosis of head injury was used since it is a health outcome unlikely to be related to vaccination.

Scientists who evaluated the study told Health Feedback that it contains numerous methodological flaws, one of which is the non-representative sample population. Karina Top, an associate professor of pediatrics at Dalhousie University, pointed out that the proportion of unvaccinated children in the study was much higher than that in the general population. According to a 2019 CDC report on vaccine coverage, only 1.3% of U.S. children had received no vaccinations at two years of age, yet "30% of children in their sample of three pediatric practices had received no vaccines," she said.

This raises questions about the type of pediatric practices included in the study. If the physicians at these practices were unsupportive of vaccination or more willing to provide medical exemptions for vaccination, these clinics would have drawn families who are more vaccine-hesitant or who object to vaccines for various reasons, she explained.

The non-representative sample is likely to have arisen due to the use of convenience sampling in the study. David Gorski, a professor of surgery at Wayne State University and editor of the website Science-Based Medicine, explained in his blog post that while the study's method of convenience sampling makes it easy to assemble a study population, this method suffers from several problems:

> "*[T]he main one being that [convenience samples] are rarely representative of the general population and therefore cannot be generalized. Others include bias and over- or underrepresentation of the population. Basically, no matter how you analyze a convenience sample, you can't generalize it to the larger population.*"

Apart from the non-representative sample population, Wagner pointed out that "A large problem with this study is that the researchers did not control for differences between the groups of unvaccinated and vaccinated children."

Controlling for differences between vaccinated and unvaccinated children is important, as vaccination status itself is associated with other factors that can influence health outcomes but do not result from vaccination itself. For example, vaccinated children are more likely to see a doctor when unwell compared to unvaccinated children for various reasons, such as socioeconomic status, accessibility to healthcare services, and possibly greater trust in healthcare professionals[2,3].

As a result, vaccinated children are much more likely to be diagnosed with medical conditions, but this does not necessarily mean that they are more likely to develop such conditions in the first place. Nina Masters, a PhD student in epidemiology at the University of Michigan, points out that the authors were aware of this bias, as they stated that "A single significant relationship was seen for the head injury control diagnosis at the 18-month vaccination cut-off, which may be indicative of differences in healthcare-seeking behavior among families of vaccinated versus unvaccinated children." But the authors did not follow up on this by informing the reader of its significance or how it might affect their conclusions.

Notably, the first author of the 2020 study is Brian Hooker, a chemical engineer who previously published a now-retractedstudy purportedly showing higher rates of autism in African-American boys who had been vaccinated. The study had used "fraudulent methods and failed to disclose conflicts of interest," said Wagner. Health Feedback also covered the retracted study in an earlier review. The second author of the 2020 study is Neil Z. Miller, a journalist without any training in biology or medicine, who has published other questionable studies in the past.

By contrast, several well-designed studies examining differences in health and developmental outcomes between vaccinated and unvaccinated children have not detected adverse health outcomes in vaccinated children. A 2004 study in *Pediatrics* showed no association between vaccines and developmental delay[4]. Another study found that children who had been vaccinated in the first year of life performed better on cognitive tests[5]. Similarly, measles vaccination in developing countries, specifically Ethiopia, India, and Vietnam, was associated with better cognitive test scores[6]. A 2011 study in Germany, which examined the incidence of allergies and infections among more than 13,000 individuals, did not find adverse health outcomes associated with vaccination[7]. Another study in Germany, published in 2014, examined more than 1,300 individuals and found that vaccination was associated with a significantly lower incidence of asthma[8]. A 2020 Cochrane Review of 138 studies showed no evidence supporting an association of MMR vaccination with asthma, bacterial or viral infections, cognitive delay, type 1 diabetes, dermatitis/eczema, and hay fever[9]. At least 20 studies have shown that vaccines are not associated with autism[4,10-29], as this Health Feedback review discussed.

Vaccines are safe and effective. The U.S. Institute of Medicine concluded in a 2013 review that the childhood immunization schedule is safe[12]. The Vaccine Education Center at the Children's Hospital of Philadelphia has also summarized the scientific evidence showing that vaccines are not associated with a higher risk of asthma or allergies and neurodevelopmental problems like attention deficit/hyperactivity disorder. The American Academy of Pediatricians has also compiled a list of studies relevant to vaccine safety here.

SCIENTISTS' FEEDBACK

Vaccines are safe and effective. Unvaccinated children can get terrible diseases—an unvaccinated 6-year old boy in Oregon was diagnosed with tetanus after having uncontrollable muscle spasms and he was hospitalized for 8 weeks. The Hib vaccine protects against epiglottitis—the swelling of the throat which can cause infants to suffocate. The whooping cough vaccine protects against a disease where children can cough until they throw up and break their ribs.

A recent study examined the relationship between the number of vaccines administered and different health outcomes. A large problem with this study is that the researchers did not control for differences between the groups of unvaccinated and vaccinated children. We know vaccinated and unvaccinated children can come from different environments: living in rural (vs. urban) areas, wealth, proclivity to go

to the doctor, etc. All these factors could differ between vaccinated and unvaccinated children and could explain differences in health outcomes. Additionally, this study includes children from handpicked medical practices and is not representative of the general population.

The first author's previous publication was retracted for fraudulent methods and undisclosed conflicts of interest.

This analysis does not account for differential healthcare seeking between the vaccinated and unvaccinated. The authors do not evaluate whether there are different numbers of doctor's visits between the two groups. For example, the unvaccinated group could be more likely to miss appointments with their doctor, which could lead to them receiving fewer vaccines and also having less opportunity for doctor's visits in which to be diagnosed with various health conditions.

The authors even acknowledge that this bias may exist: "A single significant relationship was seen for the head injury control diagnosis at the 18-month vaccination cut-off, which may be indicative of differences in healthcare-seeking behavior among families of vaccinated versus unvaccinated children." Yet they do not present any information that would enable the reader to better understand the role and scale of this bias.

Diagnosis with many developmental delays may occur in the 3-5 year range, but growing evidence has shown that the factors that lead to these diagnoses occur early in life and during prenatal development —long before any vaccination.

First, we know that the large majority of parents do choose to follow vaccine recommendations and at age two only 1.3% of U.S. children had received NO vaccinations. The finding that 30% of children in their sample of three pediatric practices had received no vaccines raises a red flag about the type of practice/physician and patients in their practice. Were the physicians not supportive of vaccines or willing to give medical exemptions and therefore attracted families that were more hesitant around vaccines or who had objections to vaccines for religious, cultural or other reasons? No details are provided regarding how they chose the practices, their location, or type of insurance they accepted (e.g. private, Medicaid).

Because the large majority of children are vaccinated, we know that unvaccinated children are very different from vaccinated children in ways that may also alter their likelihood of being diagnosed with childhood conditions such as asthma, ear infections, and development delay. For example, children from large families with low socioeconomic status may have difficulty getting to vaccination appointments, but those same challenges may make it difficult to get to a physician appointment for a new health problem. The analysis did not take into account demographic or other factors that might influence both a child's chance of getting vaccinated and their chance of getting diagnosed with any of those conditions (e.g. insurance status, parent age, education, race/ethnicity, presence of other children).

Finally, both authors are well known for promoting unscientific claims about potential harms of vaccines, including the myth of an association between vaccines and autism for which the lead author has had two of his publications retracted by journals, suggesting an inherent bias in their approach.

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Autism Vaccine

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Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

June 12, 2020

Fact-Checking the Facebook "Fact-Checkers"

By Brian S. Hooker, CHD Board Member, and Science Advisor, Focus for Health

On May 27, 2020, the paper "Analysis of Health Outcomes of Vaccinated and Unvaccinated Children: Developmental Delays, Asthma, Ear Infections and Gastrointestinal Disorders" that I coauthored with Neil Z. Miller was published in the journal SAGE Open Medicine. By June 2, 2020, Facebook "fact-checkers" declared the paper "unsupported" and flagged Children's Health Defense's references to the study on the social media platform. Instead of following the link to the peer-reviewed study, Facebook now directed the reader to a critique completed by Healthfeedback.org, an organization that is a part of the World Health Organization's Vaccine Safety Net with ties to the Gates Foundation. To view the original paper, one would have to bypass the "fact-check" to be directed to the SAGE Open Medicine website.

… the "fact-checkers" label my previous Hooker 2014 study "fraudulent," a most serious and reputation-harming charge.

Playing fast and loose with the facts

Unfortunately for the public, the so-called "fact-checkers" at Healthfeedback.org play fast and loose with the facts. First, prior to considering the study at hand, the "fact-checkers" label my previous Hooker 2014 study "fraudulent," a most serious and reputation-harming charge. "Fraudulent" is a legal term of art which means "the intentional use of deceit, a trick or some dishonest means to deprive another of their money, property or a legal right." The fact of the matter is that Translational Neurodegeneration, where my 2014 study was published, did retract the article under enormous pressure from the Vaccine Industry. But, in so doing, that Journal never cited "fraud," "deception," or "dishonesty" as a basis for the retraction. Rather, that Journal retracted the article because of a purportedly undisclosed conflict of interest, but without any finding that the non-disclosure was intentional or material. Indeed, that study has since been republished in an expanded form (Hooker 2018).

The U.S. Center for Disease Control's (CDC) own studies, many that are cited in the "fact-checking" piece, are almost exclusively based on convenience samples.

Using a convenience sample

The primary criticism of the Hooker and Miller 2020 study was the use of a convenience sample which refers to the cohort of 2047 children, from 3 separate pediatric practices in the United States, that formed the basis for our study. Convenience samples are used routinely in epidemiology and also form the basis for the FDA approval of drugs and biologics.

Within the piece, Dr. David Gorski, a pro-pharma blogger states, *"Basically, no matter how you analyze a convenience sample, you can't generalize it to the larger population."* FALSE. The U.S. Center for Disease Control's (CDC) own studies, many that are cited in the "fact-checking" piece, are almost exclusively based on convenience samples. The study presented by Destefano et al. 2004 in the journal *Pediatrics* on the timing of the MMR vaccine and autism was completed using a convenience sample of approximately 2400 children in public school districts in Metropolitan Atlanta. This was *not* a representative sample of the U.S. population as the percentage of African American children in the study was 35.4% compared to that of the U.S. at the time at 16%. Yet this study is the CDC's basis for denying a causal link between the MMR vaccine and autism in the U.S.

The "fact-checkers" cite Andrews et al. 2004 (Pediatrics) which is also based on a convenience sample of children in the United Kingdom despite the fact that the CDC cites it as "proof" that thimerosal-containing vaccines in the United States do not cause autism. Also, the "fact-checkers" cite four studies (regarding both thimerosal-containing vaccines and the MMR vaccine) on children in Denmark as proof that vaccines don't cause autism in U.S. children despite many distinctions between the two populations of children.

Finally, the "fact-checkers" cite five studies that are based on the CDC's Vaccine Safety Datalink, a computerized database of the records from nine Health Maintenance Organizations in the U.S. This could also be considered a "convenience sample" as it excludes children who are on Preferred Provider Organization (PPO) plans as well as those on Medicaid and focuses only on the HMO demographic.

The necessary meaningful statistics

Evidently, the "fact-checkers'" big beef with the use of a convenience sample is the fact that 30.9% of the cohort was unvaccinated by their first birthday. This number makes sense in a study of vaccinated versus unvaccinated children as a significant number of unvaccinated children would be necessary to derive any meaningful statistics whatsoever. "Fact-checkers" accuse the co-investigators of not controlling for differences between vaccinated and unvaccinated children but seem to ignore the fact that we selected and

evaluated differences in the control diagnosis of head injury, a diagnosis that has nothing to do with vaccination. When the "fact-checkers" do acknowledge the control diagnosis, they point out a single, marginally significant relationship between vaccination status and head injury reported in Hooker and Miller, 2020 but neglect to point out that for all of the rest of the analyses (11 total), no relationship between vaccination and head injury was observed. Hooker and Miller discuss differences in healthcare seeking behavior between vaccinated and unvaccinated children as a potential limitation of the paper and cite Glanz et al. 2013 which showed that under-vaccinated children were less likely to see medical practitioners for outpatient visits, with an incidence risk ratio of 0.89. However, it is clear that effect estimates above 2.0 cannot be explained away simply by stating that unvaccinated children are not going to their healthcare provider as much.

It's unclear why the 'fact-checkers' discuss autism when 'fact-checking' our paper since we never analyzed autism.

The 2004 Pediatrics study (Andrews et al. 2004) cited by the "fact-checkers" showing "no association between vaccines and developmental delay" was completed on thimerosal-containing vaccines with a control group of thimerosal-free vaccines. The "fact-checkers" deceptively couch this as "vaccinated versus unvaccinated study" but there were no unvaccinated children considered in the analysis. The "fact-checkers" also deceptively state that over 20 studies show that vaccines are not associated with autism. It's unclear why the "fact-checkers" discuss autism when "fact-checking" our paper since we never analyzed autism. Again, the studies listed focus on thimerosal-containing vaccines and the MMR vaccine considered separately and did not consider unvaccinated children. The only study focused on the vaccination schedule (Destefano et al. 2013) is fraught with methodological errors, including overmatching of cases and controls, to the point that it is scientifically invalid, not to mention that there were no unvaccinated children in the study.

"Fact-checkers" also cited studies claiming better cognitive performance in vaccinated children. However, these studies considered no unvaccinated children but instead looked at minor delays in the vaccination schedule (Smith and Woods 2010) or the presence/absence of measles vaccination in children who received the BCG and polio vaccine (Nandi et al. 2019).

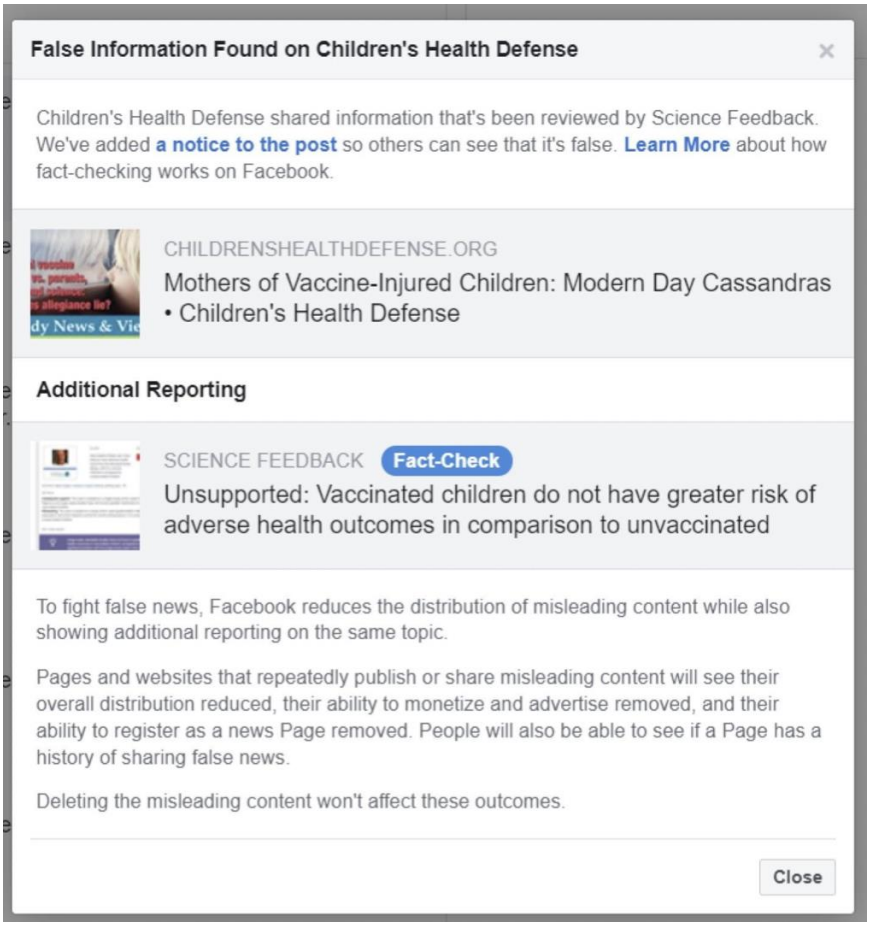
Facebook's censorship of the paper I coauthored with Neil Miller is pedestrian. Looking beyond the veneer of the write-up of the "fact-checkers," one sees an attempt to deceive, not educate the reader. I welcome everyone to receive our work with an open mind. Our recommendation from the study is clear: "A thorough evaluation of vaccinated versus unvaccinated populations is essential to understanding the full spectrum of health effects associated with specific vaccines and the childhood vaccine schedule in totality." In addition, Children's Health Defense has an exhaustive compilation of studies where vaccinated and unvaccinated populations are compared.

Dr. Elizabeth Mumper (June 2, 2020)

Original Article:

https://childrenshealthdefense.org/news/mothers-of-vaccine-injured-children-modern-day-cassandras/

Facebook's Overlay:



Science Feedback Article linked to Fact Check:

https://healthfeedback.org/claimreview/significant-methodological-flaws-in-a-2020-study-claiming-to-show-unvaccinated-children-are-healthier-brian-hooker-childrens-health-defense/

June 02, 2020

Mothers of Vaccine-Injured Children: Modern Day Cassandras

By Elizabeth Mumper, M.D., FAAP, The Rimland Center

Some days I feel like Cassandra, the Greek woman who could see the future, but not articulate it in a way that gave her credibility. In the tragedy *Agamemnon,* Apollo promised Cassandra the gift of prophecy if she would be his lover. She accepted the gift, then rebuffed Apollo when he desired sexual favors. Apollo got revenge by ordaining her predictions would be rejected. She predicted the Trojan horse battle and Agamemnon's bloody death, but no one believed her.

Parents of children with complex chronic illness must also feel like Cassandras. Hundreds of times I have taken detailed histories from parents in which seemingly healthy children deteriorated or regressed within 24-48 hours of a vaccine, often ending up in the Emergency Department, only to be told that it was a "coincidence" and that the vaccine could not be the cause. This seems to be in direct opposition to the usual course of events when a clinician is presented with a new symptom and we are taught to ask about any new or different events, exposures or experiences. Concerns raised by intelligent parents that their child is getting too many vaccines at once are typically dismissed. The bar to get compensation in Vaccine Court is incredibly high, with restrictions based on original "vaccine injury tables" despite a significant expansion of the number and types of vaccines introduced since the 1986 National Vaccine Compensation Program legislation. The injuries are often lifelong and change the trajectory of family life completely.

In 1997, my experience with a patient I vaccinated opened my eyes to the possibility that CDC recommended vaccines were causing significant harm to at least a subset of children who received them. Five years later, I took my concerns to the University that trained me, where I was taught basic rules of pediatrics: 1) first do no harm 2) listen to the mama 3) look at the child. I delivered Pediatric Grand Rounds, sharing my concerns about the exponentially increasing rates of autism and other neurodevelopmental disorders, the gastrointestinal symptoms of my patients with autism including digestion, dysbiosis and digestive enzyme problems, and emerging data implicating gut-brain interactions. I hypothesized that the rapidly expanding vaccine schedule might be related. It was a message the audience of pediatric faculty and residents did not want to hear.

Ironically, the problems with digestive enzymes I discussed have now been confirmed by Buie and Kushak at Harvard in multiple peer reviewed published studies. The role of gastrointestinal problems in autism and understanding the gut brain connection now form the backbone of functional medicine and offer a pathway to improving the lives of chronically ill children and their families. Articles on the communication between gut, brain, and endocrine systems populate highly respected medical journals.

Sadly, the rates of autism reported as 34 per 10,000 in 2002 and dismissed as due to better recognition and diagnosis (another speculation not borne out by the data) have continued to rise exponentially at6-15% per year to the current rates of 1 in 54 children (185 per 10,000) who have autism and one in six who have other developmental or behavioral problems. It is crucial to remember that the analysis published in March 2020 (and largely overlooked by the media in the Age of COVID) was based on a birth cohort from 2008 (8-year-old children were studied in 2016 for the statistics published 4 years later).

This week, Hooker and Miller published data from three geographically distinct pediatric practices. The real-life data, collected over 10 years, examined the relationship between the number and timing of vaccines and presence of chronic illnesses, including neurodevelopmental problems, asthma, gastrointestinal problems and ear infections. Younger ages at vaccination and increasing number of vaccines were associated with more developmental delays, asthma and ear infections. In fact, for ear infections subdivided by quartile of number of vaccines, there was a linear relationship between more vaccines and more ear infections.

I predict the mainstream media and the American Academy of Pediatrics will try to cast doubt on the findings in this study. Yes, there are limitations to retrospective practice-based research, which Hooker articulates quite well. I would argue that, if the AAP or CDC or NIH had agreed to the comparison studies of vaccinated vs. unvaccinated children that the parents of children with chronic disease have been asking for since the dawn of the current century, we would have prospective, controlled studies by now. The burden would not have fallen upon clinicians busy taking care of complex chronic illness to be unfunded clinical researchers.

What makes this data compelling is the wealth of scientific information that has accumulated in the past two decades about mechanisms involved in neurodevelopmental disorders, immune dysregulation, mitochondrial dysfunction, environmental toxicity and metabolic derangements. Such research includes but is not limited to:

- Jill James and Richard Deth's body of published science about methylation biochemistry: how it is disrupted by environmental triggers, how it influences gene expression and how often it is abnormal in children with chronic illness.
- Chris Shaw and colleagues' body of published science about the effects of aluminum on human tissue and its presence in the brains of people with neurodegenerative

diseases.

- Bob Naviaux's highly ranked published science about the crucial role of the mitochondria and the downstream effects on health when mitochondria change from making energy to "battening down the hatches" in the cell danger response.
- Chauhan, McGinnis and multiple other scientists' published papers delineating the biochemistry and cellular effects of prolonged oxidative stress on tissues and human illness.
- Jim Adams and colleagues on deficient nutritional status and potential value of fecal microbial transplants in children with autism.
- Van de Water and Ashwood's body of published work on Maternal Immune Activation and increased inflammatory cytokines in intestinal biopsies of children with autism vs. controls.
- MacFabe's studies about the role of propionic acid in neurodevelopmental disorders.
- Rossignol and Frye's published work on folate receptor antibodies and mitochondrial dysfunction in neurodevelopmental problems.

Many people assume that vaccine safety trials must be exceptionally well designed and executed, since they are given to populations at large. They are shocked to find out that Hepatitis B vaccine studies tracked side effects for four or five days before the decision was made to vaccinate every newborn in the US. After concerns about the role of MMR and inflammatory bowel disease, 23 different post-licensing trials were conducted on the MMR-II vaccine—no patient was followed for more than 42 days post-vaccination. You cannot find what you do not look for.

The Institute of Medicine, trusted to make evidence-based recommendations, examined the current scientific literature, and found inadequate evidence to accept or reject a causal relationship between 135 of 158 relationships between vaccines and adverse events. Among the remaining 23 adverse events, 18 were found to be associated with vaccination and five were not.

Hooker's analysis used a cohort study design with strata for medical practice, year of birth and gender. DTaP and MMR were counted as a single vaccine even though each contained 3 vaccines in one injection.

In the Hooker publication, it should be noted that a patient receiving even just **one** vaccine in the first 380 days of life would fall into the "vaccinated" category. "Unvaccinated" patients had no vaccine doses on record prior to their first birthday plus 15 days. In my view, this design makes the data even more compelling. The data showed that children were more likely to be diagnosed with developmental delays, asthma and ear infections if they received a higher number of vaccines versus fewer immunizations.

As a pediatrician who was taught little about mechanisms of vaccine efficacy or adverse events in medical school or residency, I was expected to follow the CDC/AAP revisions

to the schedule without questioning. Recent legislative action removing medical or religious exemptions are taking away the physician's ability to consider vaccine administration in the context of the individual patient. It is ironic that, during this age of personalized, integrative and functional medicine in which people wear devices to collect precise individualized data, we seem to be doubling down on a "one size fits all" vaccine policy.

In the Cassandra analogy, mainstream medicine and university pediatric curriculums are the Apollos to which I should owe my allegiance. However, I would argue that my allegiance is to my patients. I would argue that the purpose of rigorous medical school and residency training is not to teach us a bunch of facts (which we know will change as science evolves) but to teach us to be analytic thinkers. I would argue that my parents, college professors and debate team coach instilled in me important critical thinking skills that are fundamental to my ability to make informed decisions in partnership with the parents who trust me with their children. If all I need to do when ordering a vaccine is to follow a published schedule, I could delegate all immunization decisions to my medical assistant.

To question medical dogma does not end well for many of us, until we find meaning in the search for truth, which should be the essence of every scientific endeavor.

Significant methodological flaws in a 2020 study claiming to show unvaccinated children are healthier

CLAIM

Vaccinated children are more likely to have adverse health outcomes like developmental delays, asthma, and ear infections compared to unvaccinated children.

VERDICT

UNSUPPORTED

DETAILS

Inadequate support: This claim is based on a single study which used highly biased methods. Rigorous and large-scale studies have not found a greater likelihood of adverse health outcomes in vaccinated children.
Misleading: The claim is based on a study which used questionable methods of selecting a study population and which failed to control for confounding factors in its comparison of vaccinated and unvaccinated children.

KEY TAKE AWAY

Large-scale, reputable studies have not found a greater incidence of adverse health outcomes in vaccinated children compared to unvaccinated children. A significant problem with the single study cited in this claim is its failure to control for differences between vaccinated and unvaccinated children, such as healthcare-seeking behavior, which can factor into health outcomes. Furthermore, the study used patient data from handpicked pediatric clinics only, which are not representative of the general population.

FULL CLAIM: Vaccinated children are more likely to have adverse health outcomes like developmental delays, asthma, and ear infections compared to unvaccinated children.

SUMMARY

A study published on 28 May 2020[1] has been used to support a claim shared in articles and social media posts on Facebook and Instagram that unvaccinated children are healthier than vaccinated children. As is typical for this type of claim, the posts have most commonly been shared by Facebook groups that oppose vaccines, but also by groups that promote conspiracy theories.

This claim is not new. A study by Mawson *et al.* in 2017 was used similarly by vaccine skeptics. Snopes found that study to be fraught with methodological problems and flawed statistical analyses which invalidated its conclusions.

The 2020 study examined the medical records of patients from three pediatric practices as a "convenience sample", selecting records with diagnoses of developmental delay, asthma, ear infection, and gastrointestinal disorder. The study authors did not clearly describe how these pediatric practices were selected. They then compared the number of vaccinated children who had received any of the four diagnoses to the number of unvaccinated children, and concluded that vaccination is associated with a higher incidence of developmental delays, asthma, and ear infections. As a control, a diagnosis of head injury was used since it is a health outcome unlikely to be related to vaccination.

Scientists who evaluated the study told Health Feedback that it contains numerous methodological flaws, one of which is the non-representative sample population. Karina Top, an associate professor of pediatrics at Dalhousie University, pointed out that the proportion of unvaccinated children in the study was much higher than that in the general population. According to a 2019 CDC report on vaccine coverage, only 1.3% of U.S. children had received no vaccinations at two years of age, yet "30% of children in their sample of three pediatric practices had received no vaccines," she said.

This raises questions about the type of pediatric practices included in the study. If the physicians at these practices were unsupportive of vaccination or more willing to provide medical exemptions for vaccination, these clinics would have drawn families who are more vaccine-hesitant or who object to vaccines for various reasons, she explained.

The non-representative sample is likely to have arisen due to the use of convenience sampling in the study. David Gorski, a professor of surgery at Wayne State University and editor of the website Science-Based Medicine, explained in his blog post that while the study's method of convenience sampling makes it easy to assemble a study population, this method suffers from several problems:

> "*[T]he main one being that [convenience samples] are rarely representative of the general population and therefore cannot be generalized. Others include bias and over- or underrepresentation of the population. Basically, no matter how you analyze a convenience sample, you can't generalize it to the larger population.*"

Apart from the non-representative sample population, Wagner pointed out that "A large problem with this study is that the researchers did not control for differences between the groups of unvaccinated and vaccinated children."

Controlling for differences between vaccinated and unvaccinated children is important, as vaccination status itself is associated with other factors that can influence health outcomes but do not result from vaccination itself. For example, vaccinated children are more likely to see a doctor when unwell compared to unvaccinated children for various reasons, such as socioeconomic status, accessibility to healthcare services, and possibly greater trust in healthcare professionals[2,3].

As a result, vaccinated children are much more likely to be diagnosed with medical conditions, but this does not necessarily mean that they are more likely to develop such conditions in the first place. Nina Masters, a PhD student in epidemiology at the University of Michigan, points out that the authors were aware of this bias, as they stated that "A single significant relationship was seen for the head injury control diagnosis at the 18-month vaccination cut-off, which may be indicative of differences in healthcare-seeking behavior among families of vaccinated versus unvaccinated children." But the authors did not follow up on this by informing the reader of its significance or how it might affect their conclusions.

Notably, the first author of the 2020 study is Brian Hooker, a chemical engineer who previously published a now-retractedstudy purportedly showing higher rates of autism in African-American boys who had been vaccinated. The study had used "fraudulent methods and failed to disclose conflicts of interest," said Wagner. Health Feedback also covered the retracted study in an earlier review. The second author of the 2020 study is Neil Z. Miller, a journalist without any training in biology or medicine, who has published other questionable studies in the past.

By contrast, several well-designed studies examining differences in health and developmental outcomes between vaccinated and unvaccinated children have not detected adverse health outcomes in vaccinated children. A 2004 study in *Pediatrics* showed no association between vaccines and developmental delay[4]. Another study found that children who had been vaccinated in the first year of life performed better on cognitive tests[5]. Similarly, measles vaccination in developing countries, specifically Ethiopia, India, and Vietnam, was associated with better cognitive test scores[6]. A 2011 study in Germany, which examined the incidence of allergies and infections among more than 13,000 individuals, did not find adverse health outcomes associated with vaccination[7]. Another study in Germany, published in 2014, examined more than 1,300 individuals and found that vaccination was associated with a significantly lower incidence of asthma[8]. A 2020 Cochrane Review of 138 studies showed no evidence supporting an association of MMR vaccination with asthma, bacterial or viral infections, cognitive delay, type 1 diabetes, dermatitis/eczema, and hay fever[9]. At least 20 studies have shown that vaccines are not associated with autism[4,10-29], as this Health Feedback review discussed.

Vaccines are safe and effective. The U.S. Institute of Medicine concluded in a 2013 review that the childhood immunization schedule is safe[12]. The Vaccine Education Center at the Children's Hospital of Philadelphia has also summarized the scientific evidence showing that vaccines are not associated with a higher risk of asthma or allergies and neurodevelopmental problems like attention deficit/hyperactivity disorder. The American Academy of Pediatricians has also compiled a list of studies relevant to vaccine safety here.

SCIENTISTS' FEEDBACK

Abram L Wagner, Research Assistant Professor (Epidemiology), School of Public Health, University of Michigan:
Vaccines are safe and effective. Unvaccinated children can get terrible diseases—an unvaccinated 6-year old boy in Oregon was diagnosed with tetanus after having uncontrollable muscle spasms and he was hospitalized for 8 weeks. The Hib vaccine protects against epiglottitis—the swelling of the throat which can cause infants to suffocate. The whooping cough vaccine protects against a disease where children can cough until they throw up and break their ribs.

A recent study examined the relationship between the number of vaccines administered and different health outcomes. A large problem with this study is that the researchers did not control for differences between the groups of unvaccinated and vaccinated children. We know vaccinated and unvaccinated children can come from different environments: living in rural (vs. urban) areas, wealth, proclivity to go

to the doctor, etc. All these factors could differ between vaccinated and unvaccinated children and could explain differences in health outcomes. Additionally, this study includes children from handpicked medical practices and is not representative of the general population.

The first author's previous publication was retracted for fraudulent methods and undisclosed conflicts of interest.

Nina Masters, PhD Student (Epidemiology), University of Michigan:
This analysis does not account for differential healthcare seeking between the vaccinated and unvaccinated. The authors do not evaluate whether there are different numbers of doctor's visits between the two groups. For example, the unvaccinated group could be more likely to miss appointments with their doctor, which could lead to them receiving fewer vaccines and also having less opportunity for doctor's visits in which to be diagnosed with various health conditions.

The authors even acknowledge that this bias may exist: "A single significant relationship was seen for the head injury control diagnosis at the 18-month vaccination cut-off, which may be indicative of differences in healthcare-seeking behavior among families of vaccinated versus unvaccinated children." Yet they do not present any information that would enable the reader to better understand the role and scale of this bias.

Diagnosis with many developmental delays may occur in the 3-5 year range, but growing evidence has shown that the factors that lead to these diagnoses occur early in life and during prenatal development —long before any vaccination.

Karina Top, Associate Professor (Division of Pediatrics), Dalhousie University:
First, we know that the large majority of parents do choose to follow vaccine recommendations and at age two only 1.3% of U.S. children had received NO vaccinations. The finding that 30% of children in their sample of three pediatric practices had received no vaccines raises a red flag about the type of practice/physician and patients in their practice. Were the physicians not supportive of vaccines or willing to give medical exemptions and therefore attracted families that were more hesitant around vaccines or who had objections to vaccines for religious, cultural or other reasons? No details are provided regarding how they chose the practices, their location, or type of insurance they accepted (e.g. private, Medicaid).

Because the large majority of children are vaccinated, we know that unvaccinated children are very different from vaccinated children in ways that may also alter their likelihood of being diagnosed with childhood conditions such as asthma, ear infections, and development delay. For example, children from large families with low socioeconomic status may have difficulty getting to vaccination appointments, but those same challenges may make it difficult to get to a physician appointment for a new health problem. The analysis did not take into account demographic or other factors that might influence both a child's chance of getting vaccinated and their chance of getting diagnosed with any of those conditions (e.g. insurance status, parent age, education, race/ethnicity, presence of other children).

Finally, both authors are well known for promoting unscientific claims about potential harms of vaccines, including the myth of an association between vaccines and autism for which the lead author has had two of his publications retracted by journals, suggesting an inherent bias in their approach.

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Autism Vaccine

Published on: 04 Jun 2020 | Editor: Flora Teoh

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Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

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June 6, 2020

Mark Zuckerberg
Facebook, Inc
1601 S. California Ave
Palo Alto, CA 94304

Dear Mr. Zuckerberg:

I am a board-certified pediatrician with 40 years of experience as a clinical practitioner and pediatric faculty member. I was shocked and dismayed when a June 2, 2020 post I wrote entitled "Mothers of Vaccine Injured Children: Modern Day Cassandras" and posted on Children's Health Defense's Facebook page was labeled "False Information" on June 4, 2020 by your fact checker "Science Feedback."

The post contained links to peer reviewed, published research and my practice experience evaluating children and families. The post makes explicit that this was a small-scale study, and that its interpretive value should be viewed accordingly, that is, as a necessarily small and anecdotal, but nonetheless significant marker of disparities in health outcomes. That fully-disclosed caveat does not make my work any less relevant as a contribution to the scientific literature on this important subject. **Critically, my post is not factually inaccurate or misleading in any way whatsoever.**

I was Medical Director of the Autism Research Institute for five years and have lectured about medical problems of children with chronic disease in 20 countries. My opinion has been formed on the basis of extensive clinical research and conscientious reading of the medical literature. I have personally asked the CDC, NIH and the AAP to do a well-controlled study comparing vaccinated to unvaccinated kids. In the meantime, and in the absence of any such more definitive work, my small-scale comparative study has interpretive value and validity, within its expressed constraints, to informing fellow practitioners, patients, and the general public.

To be publicly labeled as a "fraud" spreading falsehoods on the basis of my post is deeply distressing, and reflects a rejection of well-accepted scientific methodologies for arriving at the truth. The coronavirus lockdown has already dealt a blow to those children I care for who have fallen through the cracks and need help for complex illnesses. I am greatly concerned that your post undermines my credibility with patients

and other doctors in the community at a time when my patients and their families are most needing of compassionate and well-informed medical care.

In short, Facebook's "False Information" tag has already damaged my professional reputation, and if permitted to stand, it will undoubtedly harm my capacity to serve my patients and the wider health-care community into the future.

It is my most sincere hope that, in consideration of this letter, your fact-checker "Science Feedback" will remove the "False Information" label on my June 4, 2020 post as soon as possible, or at the latest, **by June 12, 2020**. Meanwhile, please contact me if you have any questions.

Sincerely,

Elizabeth Mumper, MD

Elizabeth Mumper, MD, FAAP, IFMCP
Advocates for Children
Advocates for Families
Work 434-528-9075
Cell 434-665-3407

Infant Deaths (June 18, 2020)

CHD Posted Article:

https://childrenshealthdefense.org/news/lessons-from-the-lockdown-why-are-so-many-fewer-children-dying/

Science Feedback Fact Check Article:

https://sciencefeedback.co/claimreview/infant-deaths-did-not-decrease-during-the-pandemic-due-to-a-reduced-use-of-vaccines-vaccines-are-not-associated-with-sudden-infant-death-syndrome/

JUNE 18, 2020

Lessons from the Lockdown—Why Are So Many Fewer Children Dying?

Originally Published as a White Paper from Health Choice

Covid19 is a serious public health issue, but the breathless reporting among the media of positive tests and an ever-rising death toll does little to instruct us about the true nature of the virus and the unprecedented steps taken to prevent its impact. As in many complex and pervasive health phenomena, there are many ways to measure health effects, but in our view the proper measure of impact is not a narrow or intermediate metric, but rather total health outcomes. In the case of a pandemic virus affecting large populations and where the immediate concern is sharp increases in deaths, the best measure of outcomes is not a selective measure of deaths somehow attributed to the disease but instead is deaths from all causes. For perspective, these deaths must be compared to historical death rates from all causes in prior years (Percent of Expected Deaths). As we will

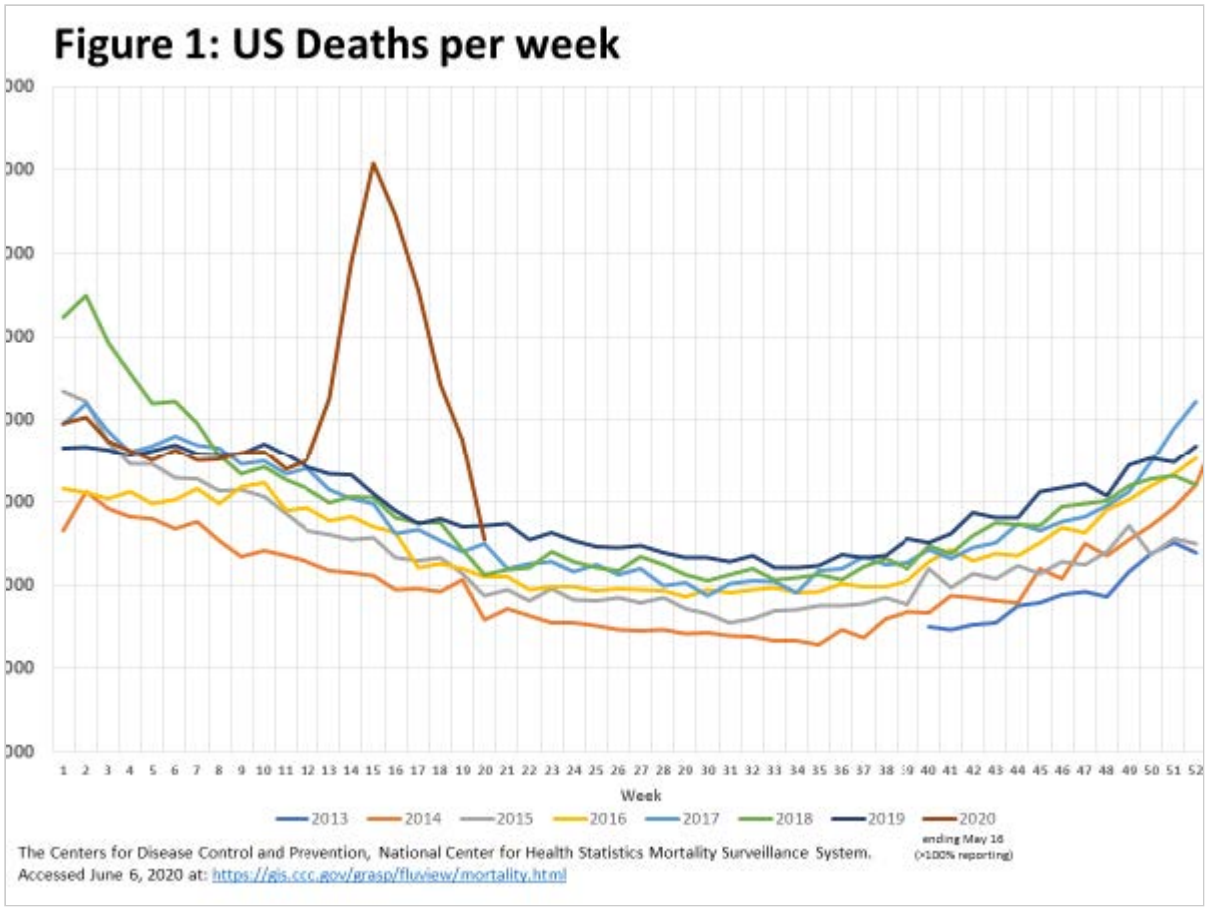
show, a balanced view of the broader American Covid19 experience demonstrates both the scale and variability of its negative outcomes in older American, especially the elderly, but also some unexpected positives. Surprisingly, U.S. mortality rates have declined among young people during the lockdown, especially among infants. These trends have gone largely unnoticed and remain unexplained.

Death rates from all causes vary widely and somewhat predictably. The most pronounced variation occurs by age cohort (most deaths occur in the elderly) and by time of year and to a lesser extent by geography. All-cause deaths are cyclical, commonly rising in the winter months and "flu season" and then falling to lower levels as warmer weather arrives. To the extent that death rates vary by region, this is mostly a result of differences in the age mix of residents. In the case of Covid19, death rates are not yet known to be cyclical but they do vary significantly by age and geography.

In the analysis that follows we have examined the evidence on total death rates by geography (mostly by state), by age group and by week (and flu season). We have extracted eight main lessons. Some of these are part of the ongoing conversation around Covid19; others are unexpected or at least have not been widely circulated. Why this discrepancy? Since the infectious disease establishment has controlled the "pandemic" narrative, the variance between this evidence and conventional wisdom is largely driven by longstanding bias and error patterns among the experts in that community.

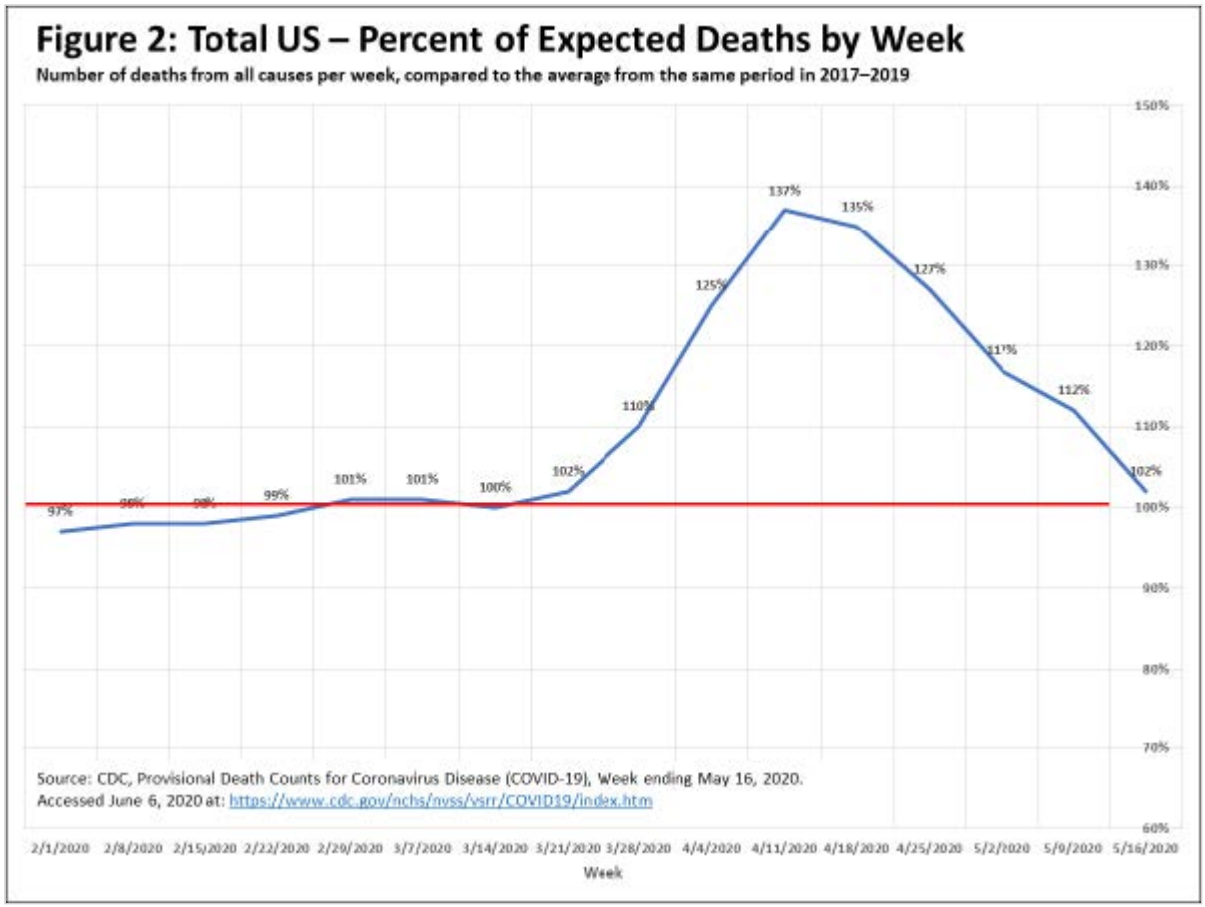
Overall U.S. trend

The Covid19 impact on all-cause deaths has been sharp and clear. Tens of thousands more Americans than expected died in a brief period. [1]



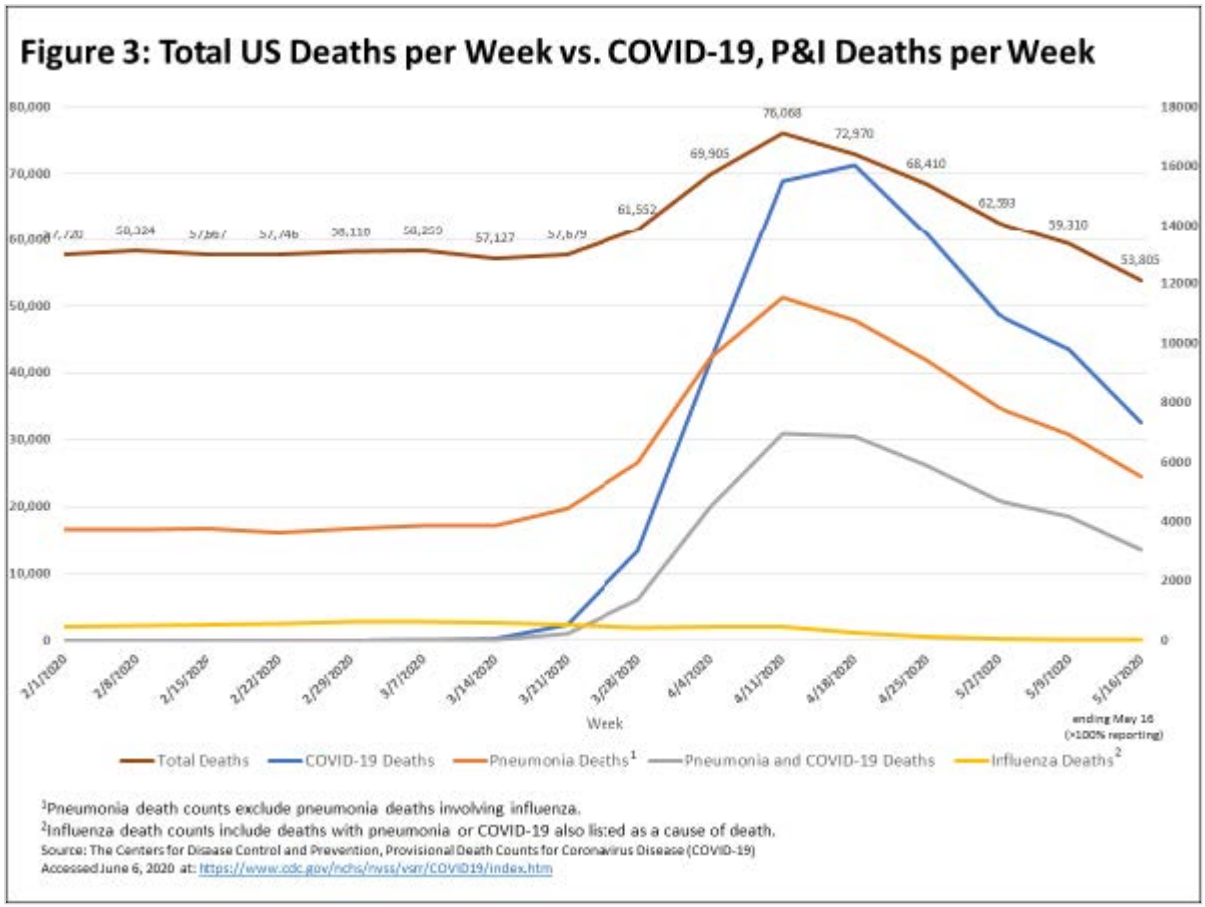
Before mid-March, overall U.S. deaths were trending at a level no different from recent years at between 55-60,000 per week. Beginning in the week ending on March 28, all-cause deaths began rising sharply, peaking in the week ending April 11 at around 75,000, or 137% of Expected Deaths for the week. Immediately thereafter, all-caused deaths began dropping sharply.

Within five weeks, all-cause deaths were back to their typical range. By the week ending May 16, the measurable pandemic death impact had ended even though Covid19-related deaths most certainly had not.[2]

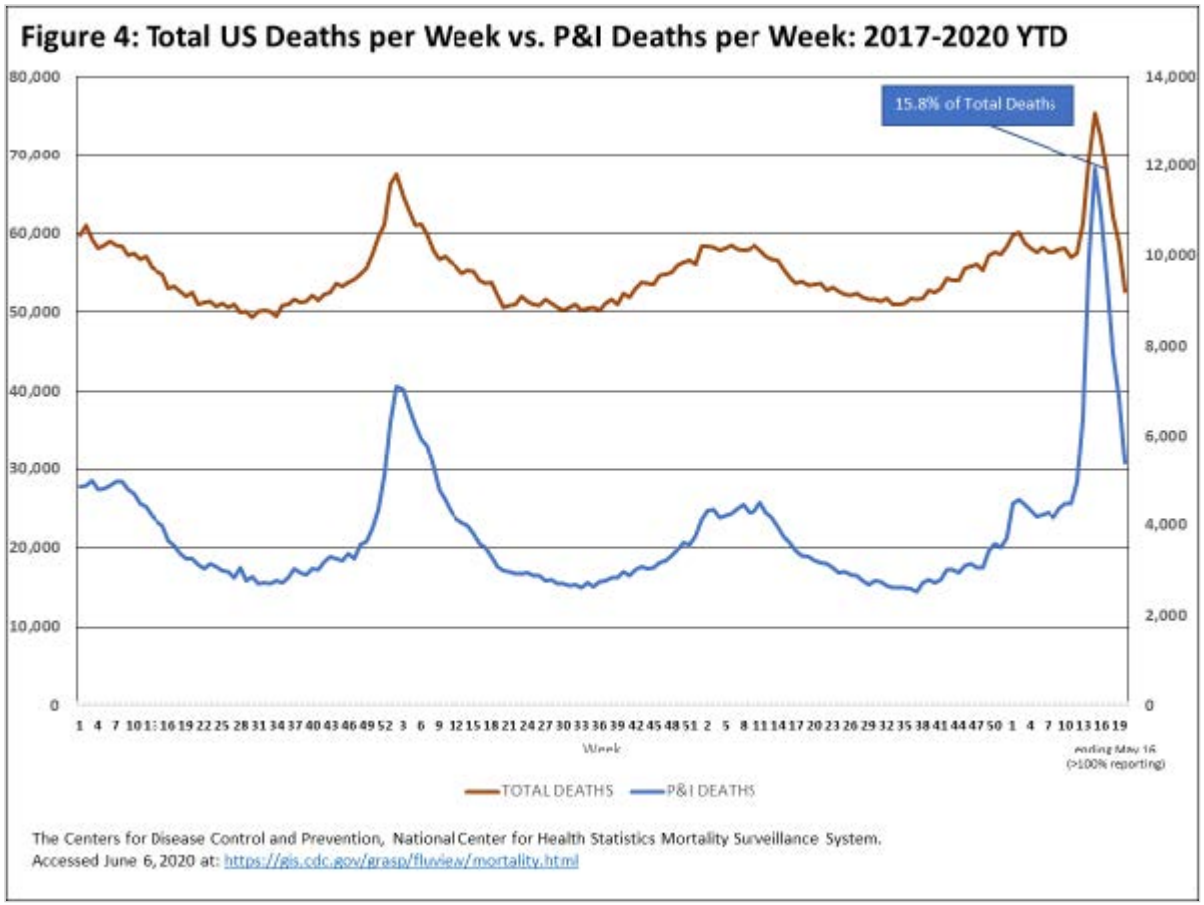


Attributing a Cause of Death (COD) to COVID-19 is not always clear-cut, due to significant overlap among COVID-19, Pneumonia, Influenza, and presumably other primary CODs. [2]

That said, the spike in deaths officially attributed to COVID- 19 occurred in tandem with the spike in all-cause deaths, leaving little doubt that Covid19 was the main contributor to the excess of expected deaths between March 22 and May 9.

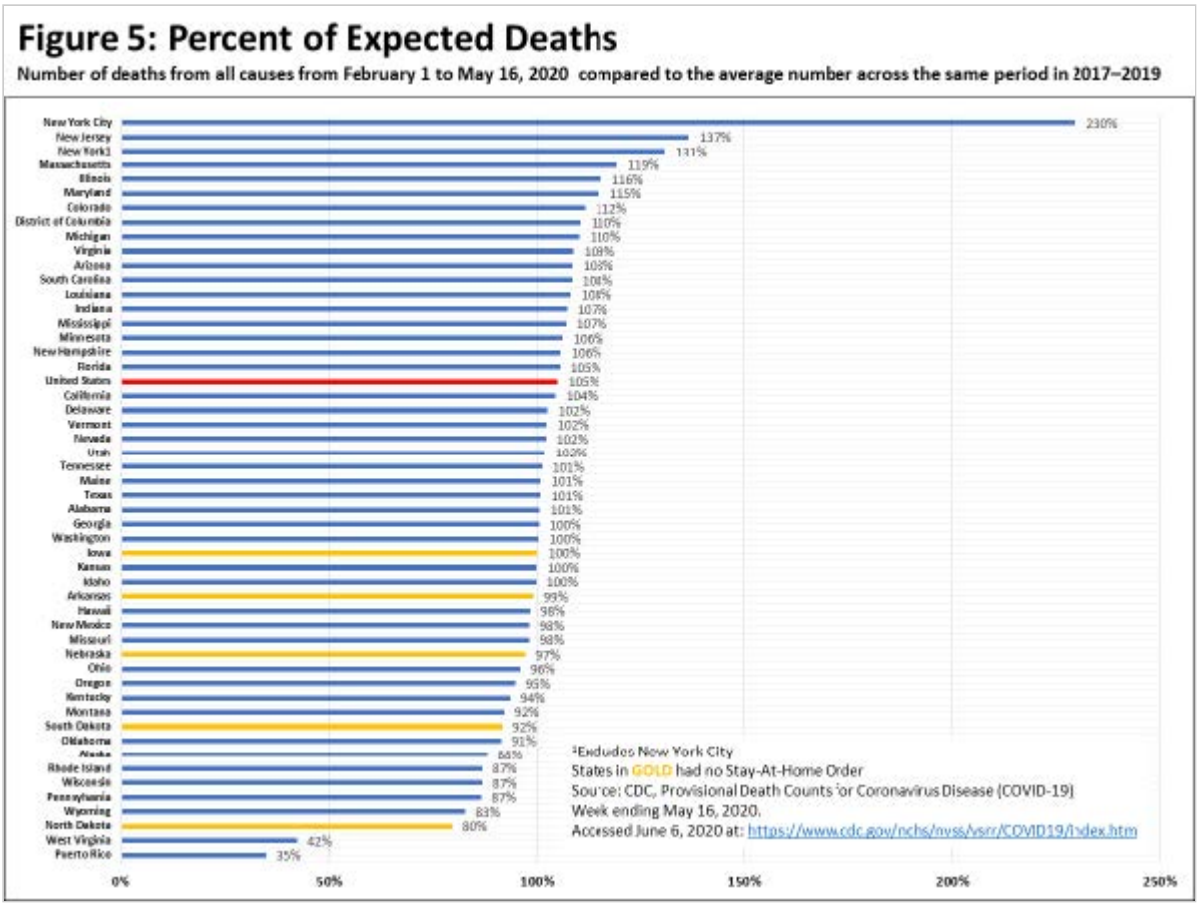


At least in this 8-week period, the Covid19 pandemic was considerably worse than a typical flu season. To the extent that all-cause deaths fell back to expected levels during May, the excess mortality attributable to the pandemic has passed. [1]



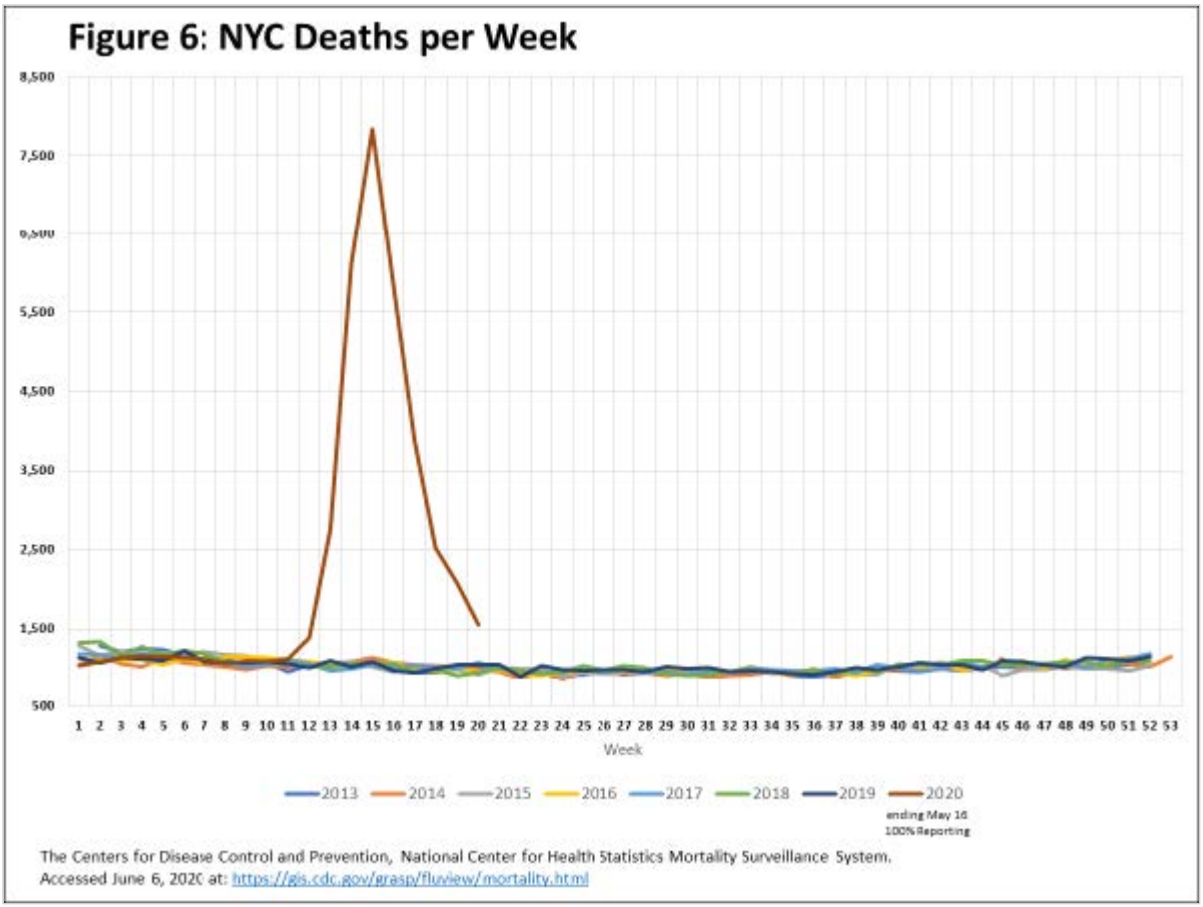
Localization

Increases in all-cause death rates during the pandemic have been extremely localized, varying widely by state/jurisdiction. For the 3 ½ month period surrounding the pandemic, starting on February 1 through May 16 (the most recent period with 100% reporting), total deaths in the US came in at 105% of expectations. [2]

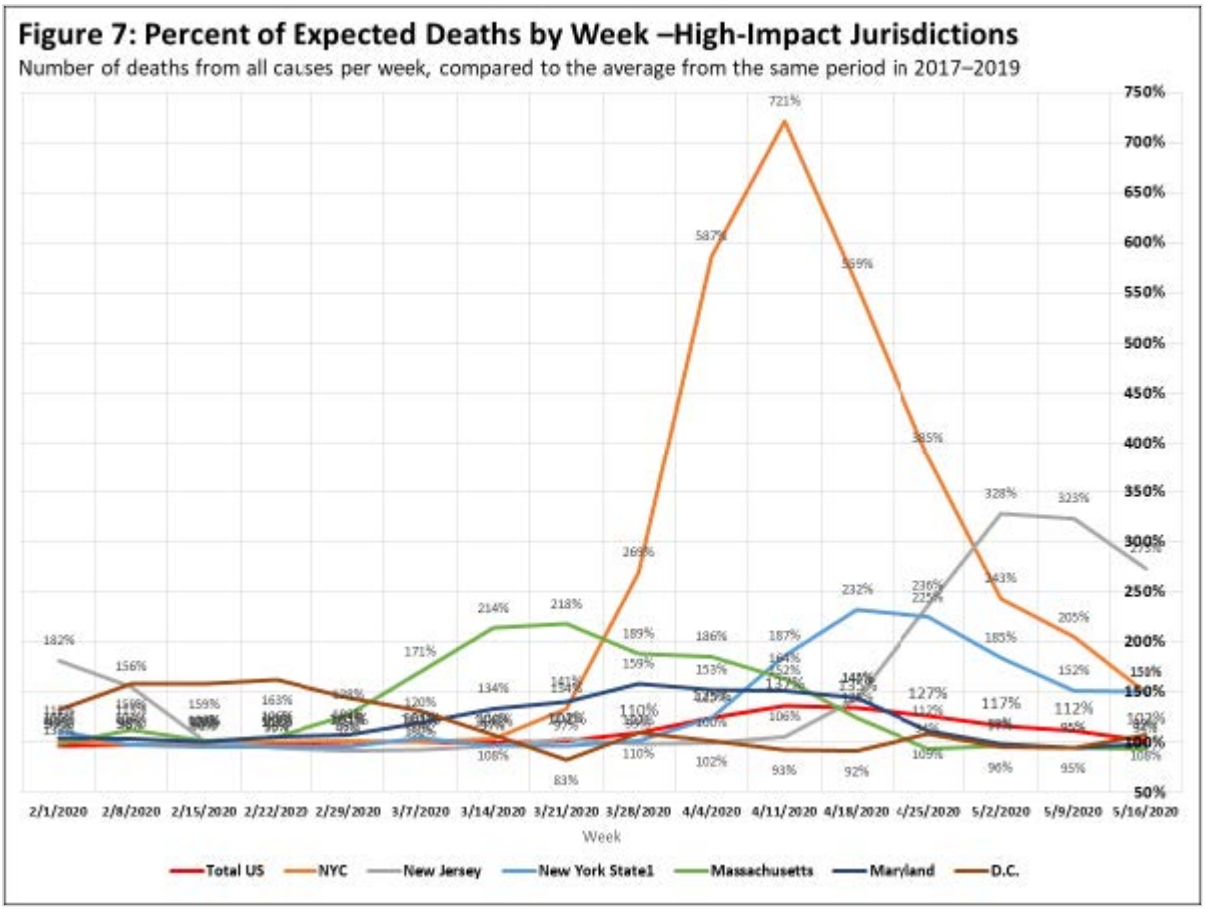


Many states actually saw *lower than expected* deaths during the period. To be sure, an excess death rate of 5% for the entire U.S. is considerable but also far short of the apocalyptic narrative the pandemic has received.

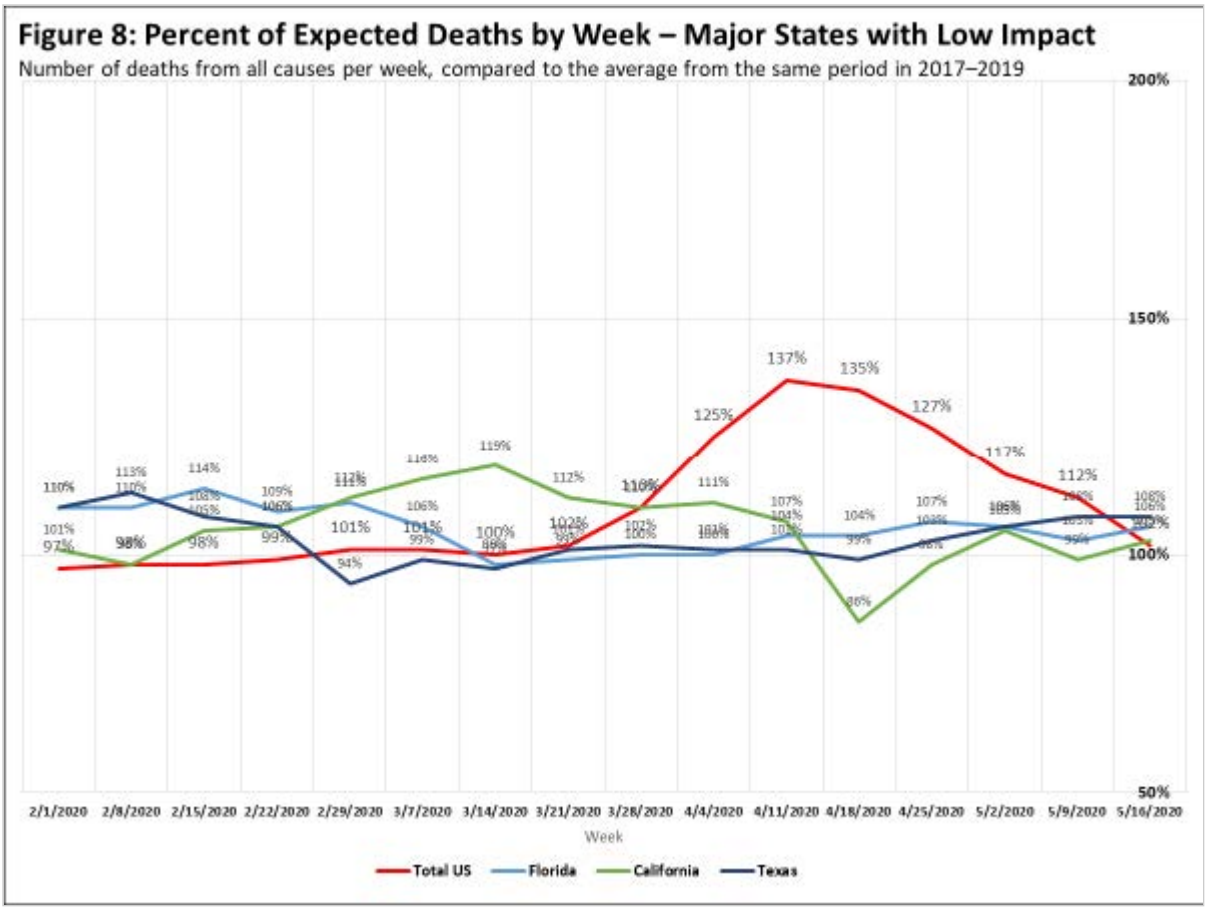
Greater-than-expected death rates were heavily concentrated in the Northeastern corridor. New York City and its surrounding area, including New Jersey, New York State (although possibly not upstate New York), Connecticut, Massachusetts, Maryland and the District of Columbia have so far comprised 6 of top 8 jurisdictions with excess all-cause deaths. New York City was hit especially hard. In a typical spring, New York City could expect 700-800 all-cause deaths per week. From mid- March to mid-May, that number spiked sharply, by ten times that amount, reaching over 7500 deaths in the peak week ending April 11. [1]



Other Northeastern states saw sharp increases in expected deaths but nowhere near New York City's rate. [2] The timing of the peaks has varied, Massachusetts came soonest, followed by Maryland, New York City New York State and New Jersey. Nevertheless, the entire region saw declines in expected deaths starting in May.

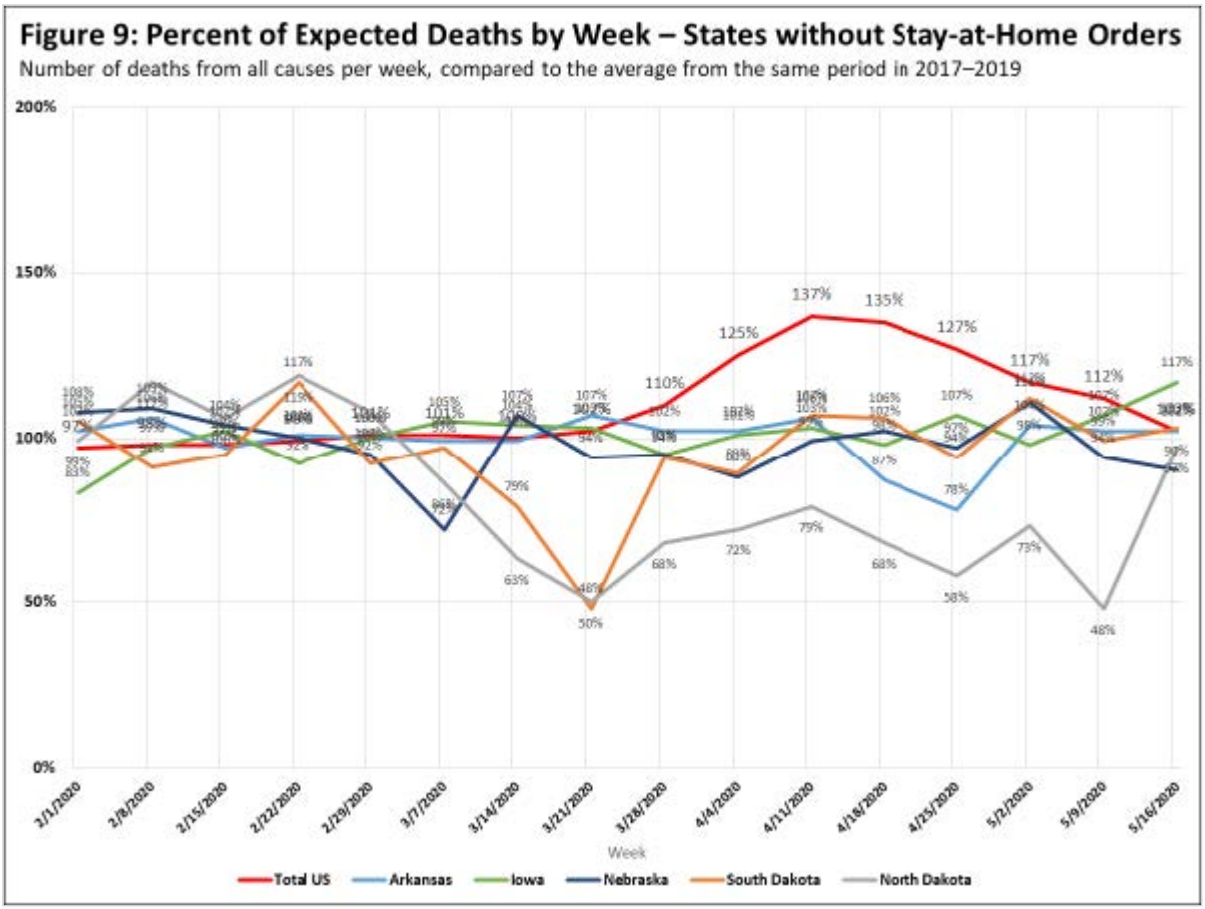


Many states saw no or only a modest increase in expected deaths, including some of the largest states such as California, Florida and Texas. [2]This suggests there may have been specific factors that influenced the experience in New York City that were not shared elsewhere.

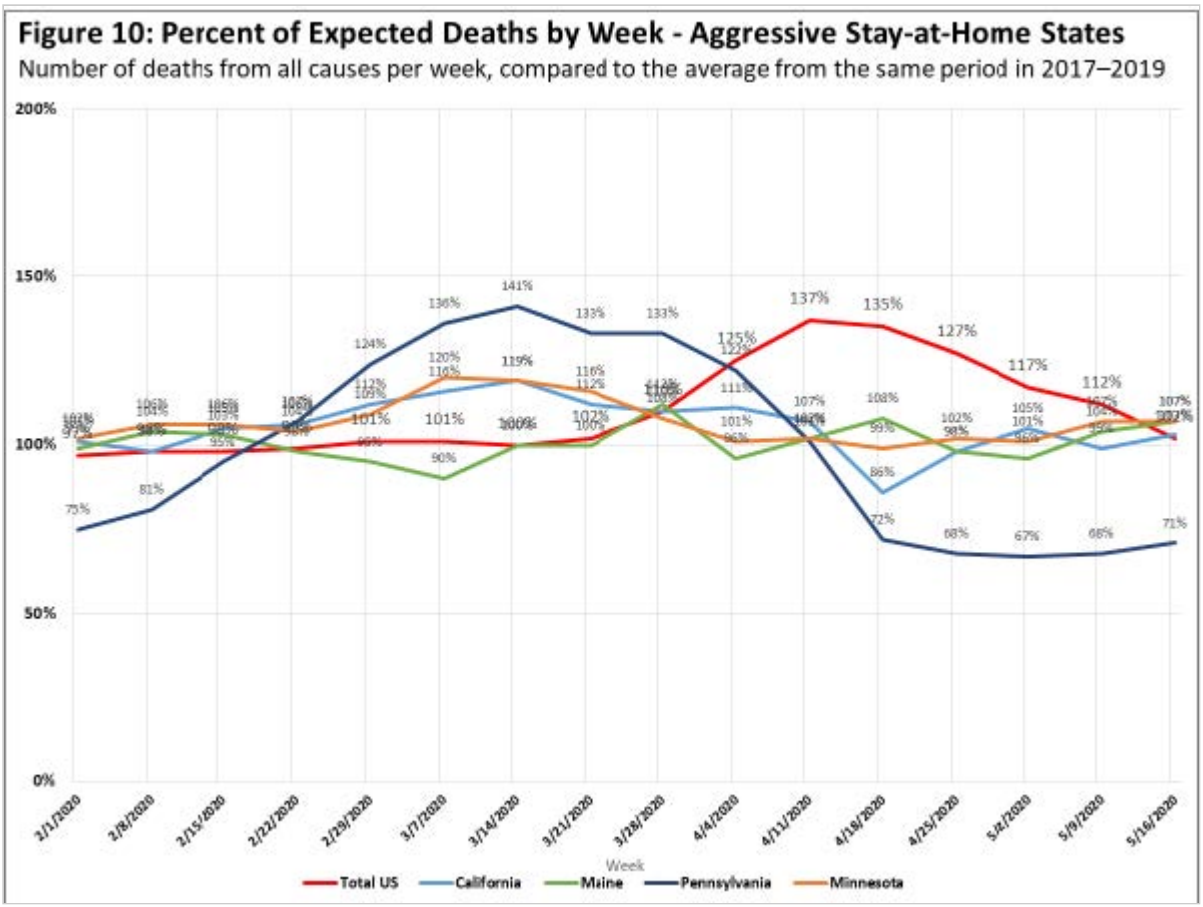


Variation by policy environment

To the extent that policies have varied across the states, it is not clear that the imposition and/or presence of stringent lock-down policies had much to do with the variation in excess deaths. Less stringent lockdown policies were not associated with higher death rates. In fact, the 5 states that chose not to impose a lockdown are among the roughly 20 jurisdictions with no excess deaths at all. [2]



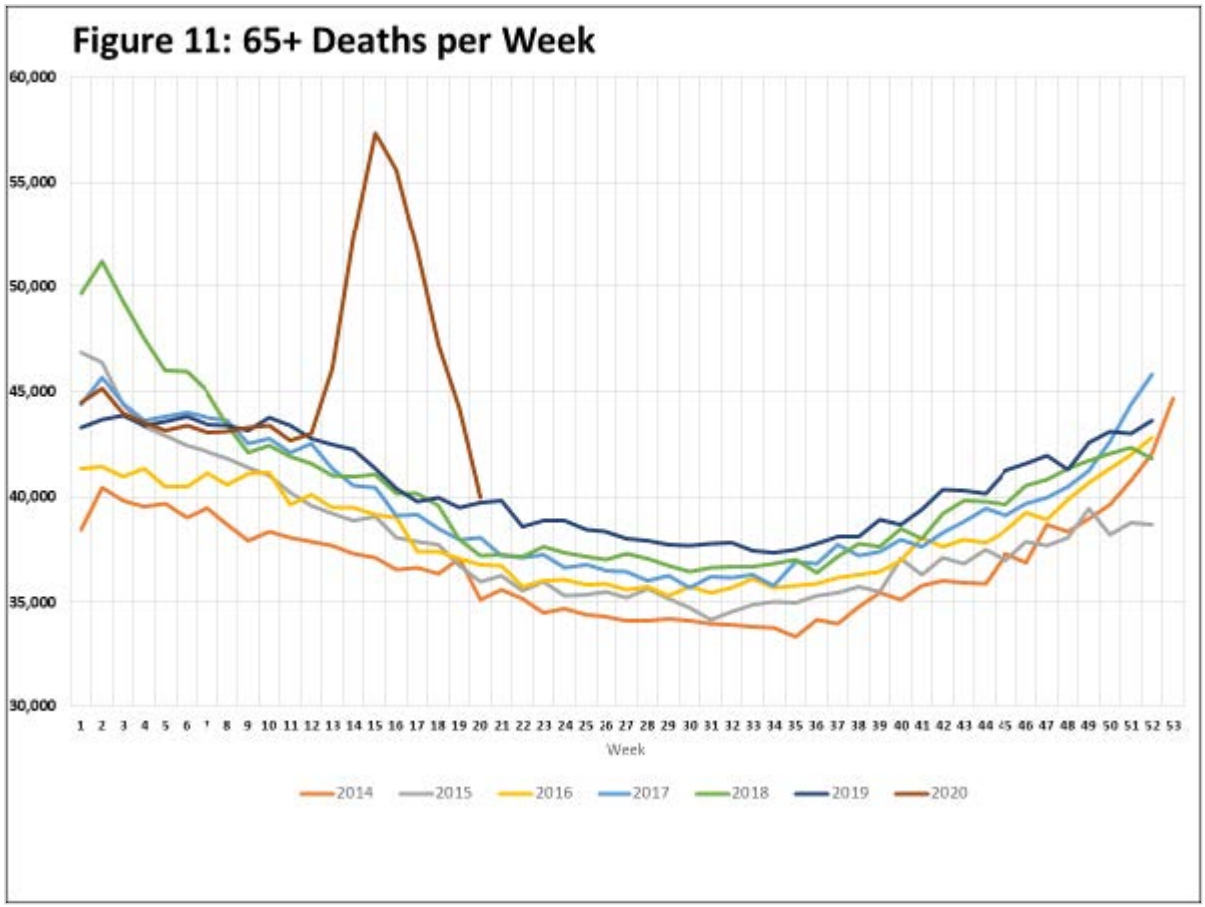
Several states with the most aggressive lockdowns, including California, Maine, Minnesota and Pennsylvania showed almost no excess deaths effect. Despite huge population centers, California looked nothing like New York City and State. Maine, a mostly rural state, imposed among the more draconian policies with essentially no reason. Minnesota followed a far more aggressive lockdown policy than its neighboring states of Iowa, South Dakota, North Dakota and Wisconsin. Yet it's Covid19 deaths were among the most concentrated in the country: roughly 80% of Minnesota's Covid19 deaths occurred among the infirm elderly who were residents of long-term care facilities. [2]



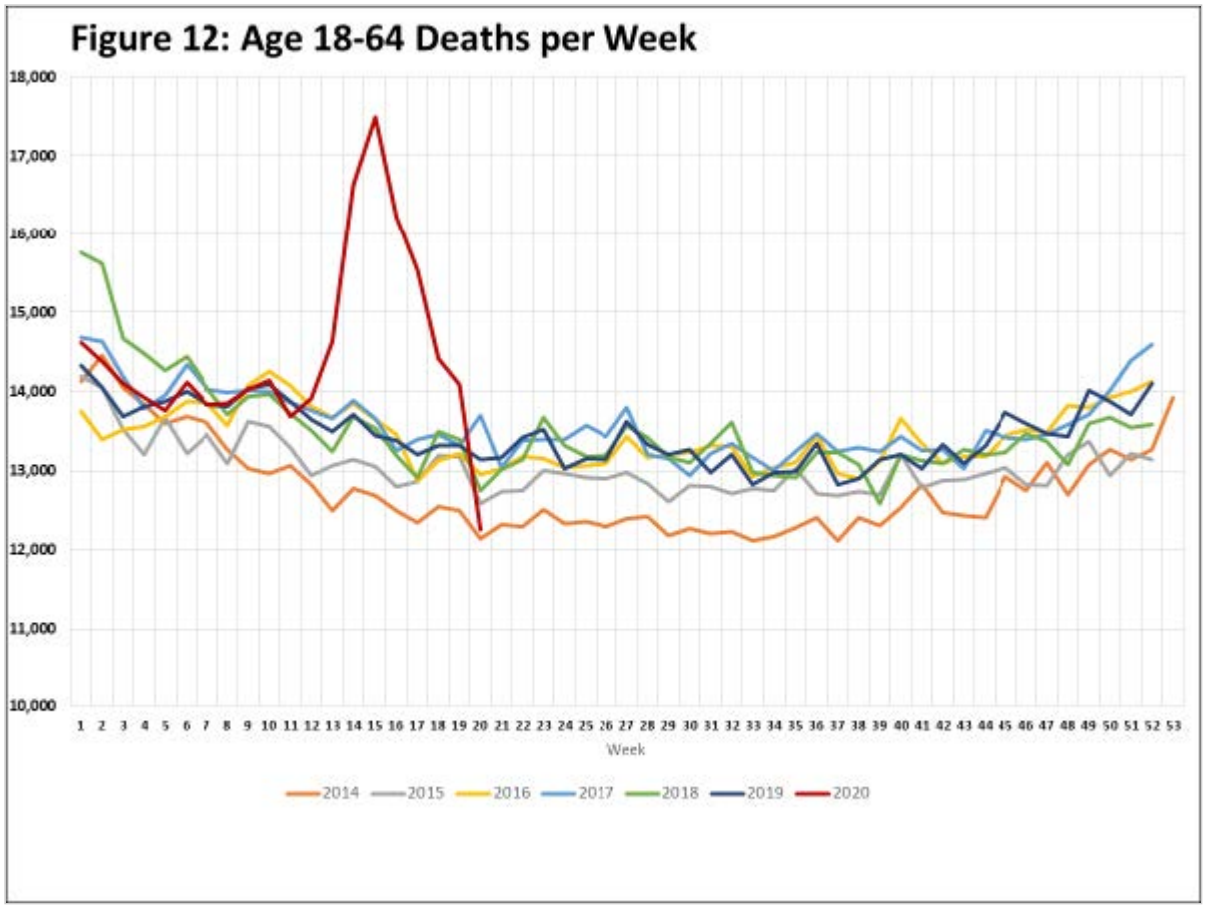
Did aggressive lockdowns stave off the worst-case scenario, preventing vulnerable states from becoming disaster areas like New York City? No controlled experiment will give us that answer. Pennsylvania makes the best case for that argument, with an early excess death pattern that resembled its neighbors in the Northeastern corridor but saw that rate drop precipitously by early April. But Pennsylvania is also an unusual geographic unit, with its largest city, Philadelphia, lying on the coast and separated from the western part of the state and its second largest city, Pittsburgh, by the Appalachian Mountains. This anomaly makes it difficult to draw clear conclusions from Pennsylvania's Covid19 curve.

Age effect: elderly

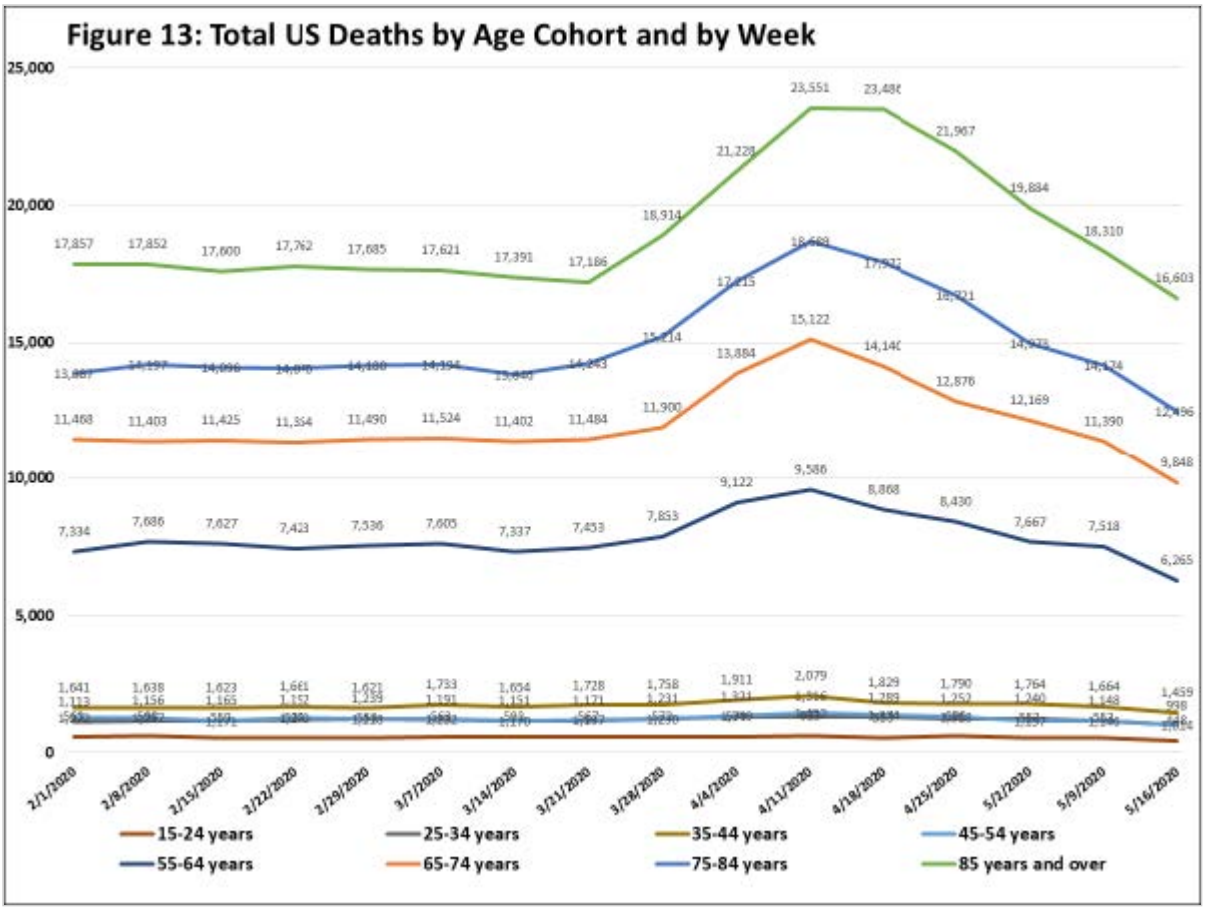
One universally accepted fact of the Covid19 pandemic is that the death risk is highest among the elderly. The all-cause death numbers show this effect clearly, with a stark increase in deaths among those 65 years and older beginning in late March, peaking in early April and then turning sharply downward in May, so that by month end the excess death rate has almost disappeared. [1]Tens of thousands of excess deaths in this age group have driven a large portion of overall US excess deaths.



Adults between 18-64 years of age show a similar pattern in excess deaths as the elderly, although the overall death toll has been less. [1]



With a dataset that provides more detailed age groupings, the impact is even more clear: the older the age cohort, the more total deaths increased during the pandemic. [3] The largest number of deaths as well as increases in deaths occur in those aged 85 years old and older, followed by those aged 75-84, next by the age group from 65-74. The sole remaining group showing an increase in deaths during the pandemic was the group aged 55-64, with a modest increase in deaths during April. For all age cohorts with ages under 55, the impact of the pandemic is undetectable.



Most observers believe they understand this age effect and discount it. That older people die more frequently is no excuse not to protect them from the pandemic. But as we have deployed lockdowns as a blunt instrument to protect the elderly from a tragic and premature loss of life-years, we have missed a completely unintended and beneficial benefit of the lockdowns: an unexplained collapse in excess deaths among the young, especially children and infants.

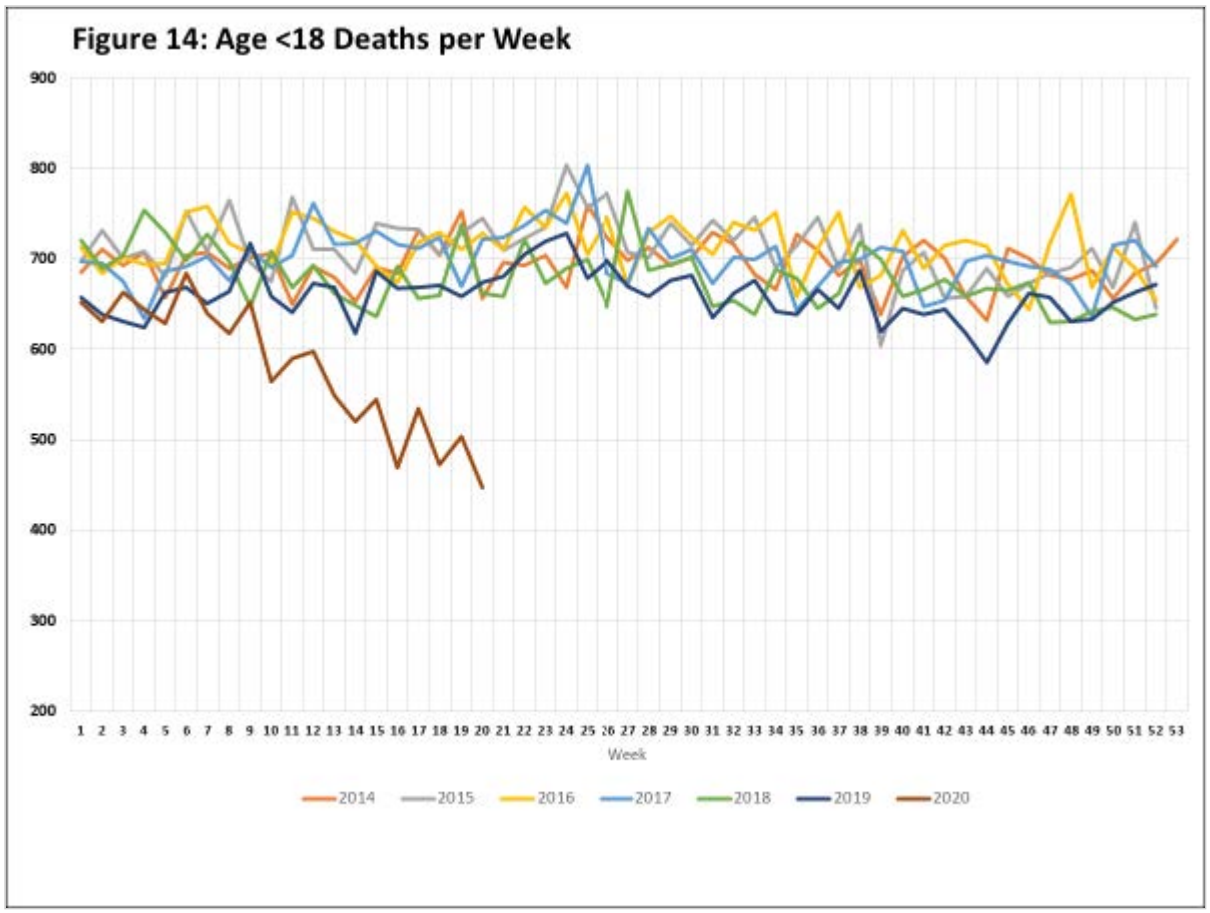
Age effect: children

Deaths among children under 18 years of age are relatively rare and show patterns that are different from their seniors. The pronounced cyclical effect in all-cause deaths one sees among adults is entirely absent in children. And whereas weekly deaths among adults dominate the overall US death toll—around 13,000 deaths per week in 18-64-year-olds and 35-40,000 deaths per week among those 65 and older—weekly deaths among children are scattered across the states and typically fall around 700. Well over half of that occurs in infants under 1 year of age.

But the pandemic experience has brought on a surprising effect on this expected death rate among children. Starting in early March, expected deaths began a

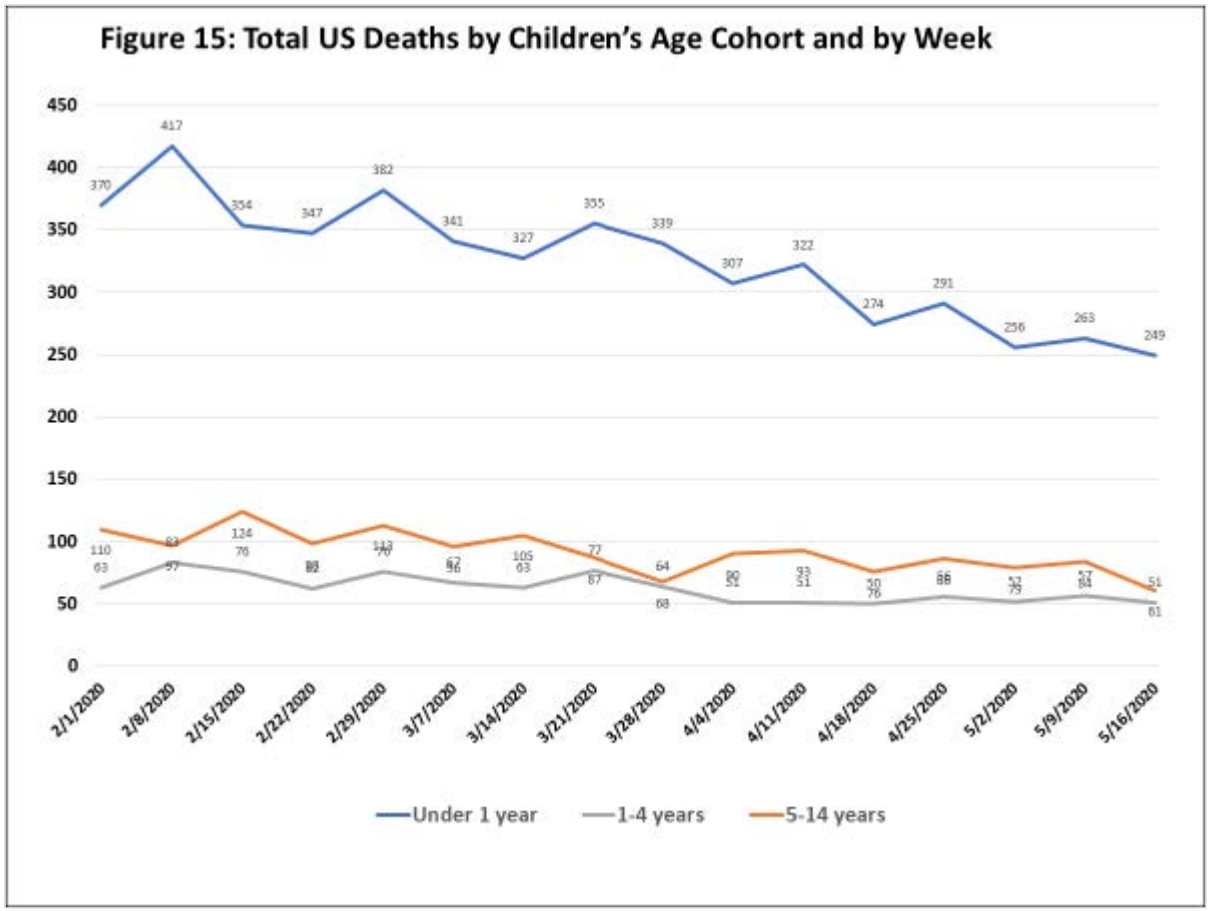
sharp decline, from an expected level of around 700 deaths per week to well under 500 by mid-April and throughout May. [1]

As untimely deaths spiked among the elderly in Manhattan nursing homes and in similar settings all over the country, something mysterious was saving the lives of children. As springtime in America came along with massive disruptions in family life amid near universal lockdowns, roughly 30% fewer children died.

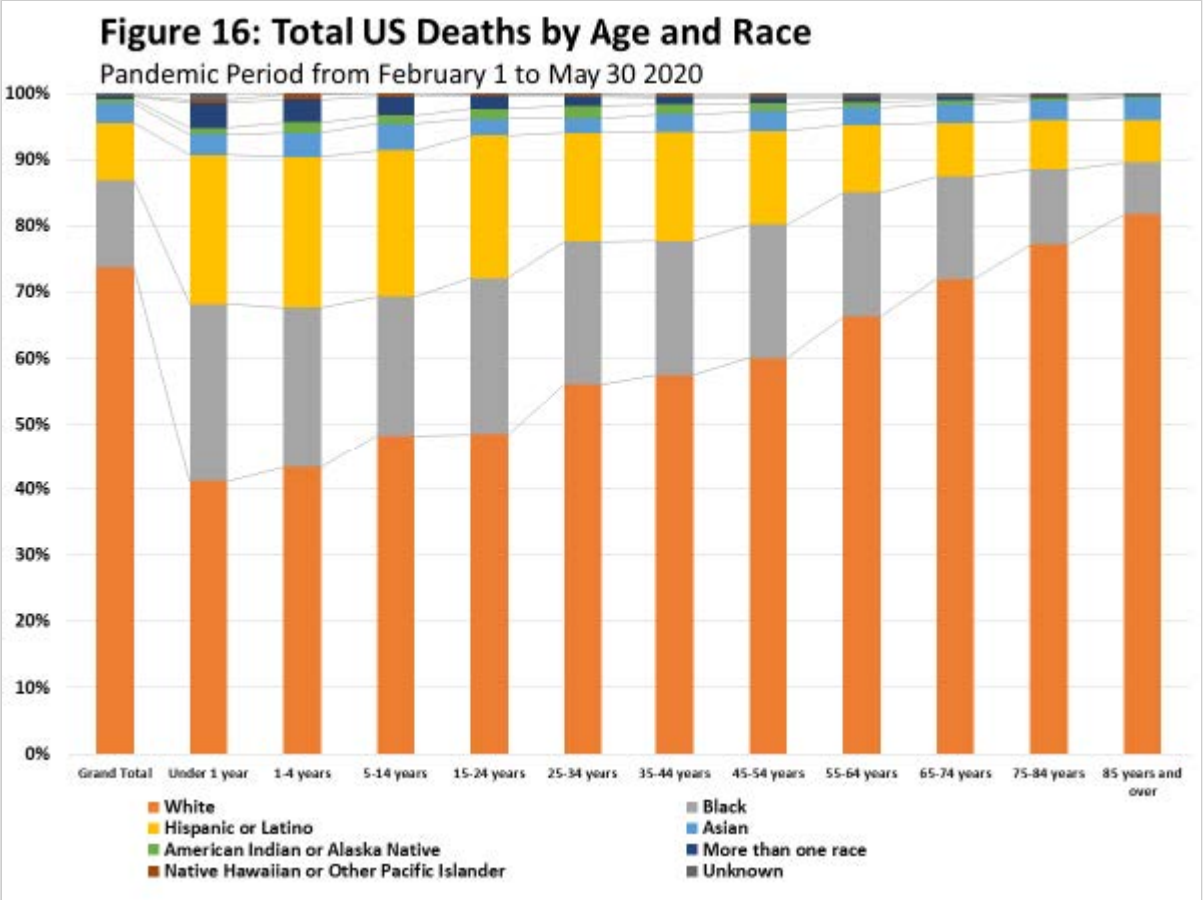


Was this a protective effect of school closures? Were teenagers getting themselves into risky situations at a lower rate? No. There was very little effect among school age children or adolescents. [3]

Virtually the entire change came from infants. Somehow, the changing pattern of American life during the lockdowns has been saving the lives of hundreds of infants, over 200 per week.



Deaths in infants and children occur at a higher rate in minority groups. [4] So the reduction in childhood deaths during the lockdowns has meant that the lives of black and Hispanic infants and children have been saved at a higher rate.



Net effect in life-years

Every untimely death is tragic. But if one considers life-years lost, the premature death of an infant carries more weight than the premature death of someone whose life expectancy is 5 years or less. And whereas the median age at death of, say, a Minnesotan dying of Covid19 is 83, the typical life expectancy of that senior citizen absent Covid19 might be just 2-3 more years. By comparison, when an infant in lockdown avoids a death, the potential impact in life years saved can rise to 80 years or more. [5]

Figure 17: Average Life Expectancy per Age Cohort	
Under 1 year	78.2
1-4 years	76.5
5-14 years	69.5
15-24 years	59.7
25-34 years	50.3
35-44 years	41.0
45-54 years	32.4
55-64 years	23.5
65-74 years	15.9
75-84 years	9.3
85 years and over	2.5

When one measures the net effect of life years either lost or gained during the pandemic and associated lockdowns, the net result across age groups is unexpectedly mixed. Not surprisingly, excess deaths are highest in the oldest seniors where life expectancy is the lowest. Combining the excess deaths with life

Figure 18: Quality-Adjusted Life-Years (QALY) Saved or Lost by US Age Group During COVID-19 Pandemic Feb 1 - May 16, 2020	
Under 1 Year	110,358
1-4 Years	13,729
5-14 years	14,590
15-24 Years	15,352
Age <25 Life Years Saved	**154,029**
25-34 years	(53,678)
35-44 years	(115,648)
45-54 years	(68,264)
55-64 years	(234,432)
65+ Life Years Lost	**(540,077)**
65-74 years	(341,519)
75-84 years	(172,317)
85 years and over	(26,240)

expectancy by age group (with an adjustment for the quality of those life-years) shows the toll of the pandemic: about 540,000 life-years lost among those 65 and older. [3, 5, 6] By comparison, the reduction in expected deaths is highest in infants, where the life expectancy benefits are the greatest. Compared to expectations, the lives of over 200 infants per week were saved during the month of May. Combining the number of lives saved in infants and children aged 1-4, demonstrates a smaller but comparably large and beneficial effect: roughly 145,000 life-years saved among children under 5. Noting the surprising effect of the lockdown on infants and children under 5 does nothing to negate the tragic effect of the pandemic on the elderly. It does, however, raise a question: why are so many fewer children dying?

Causation?

When infants die, the cause is frequently some form of congenital condition or birth defect. Sadly, accidents and homicides are frequent causes as well. There are however, frequent cases in which previously healthy infants die unexpectedly. These deaths are usually classified as “Sudden Infant Death Syndrome” or SIDS. According to the CDC, SIDS deaths are one of the two largest causes of death among infants aged 1 month to 1 year. [7]

Figure 19: Postnatal Infant Causes of Death, 2017 (aged 1 month - 1 year)	
Cause	IMR*
Congenital Malformation	0.32
SIDS	0.32
Accidents	0.31
Circulatory Complications	0.09
Homicide	0.07

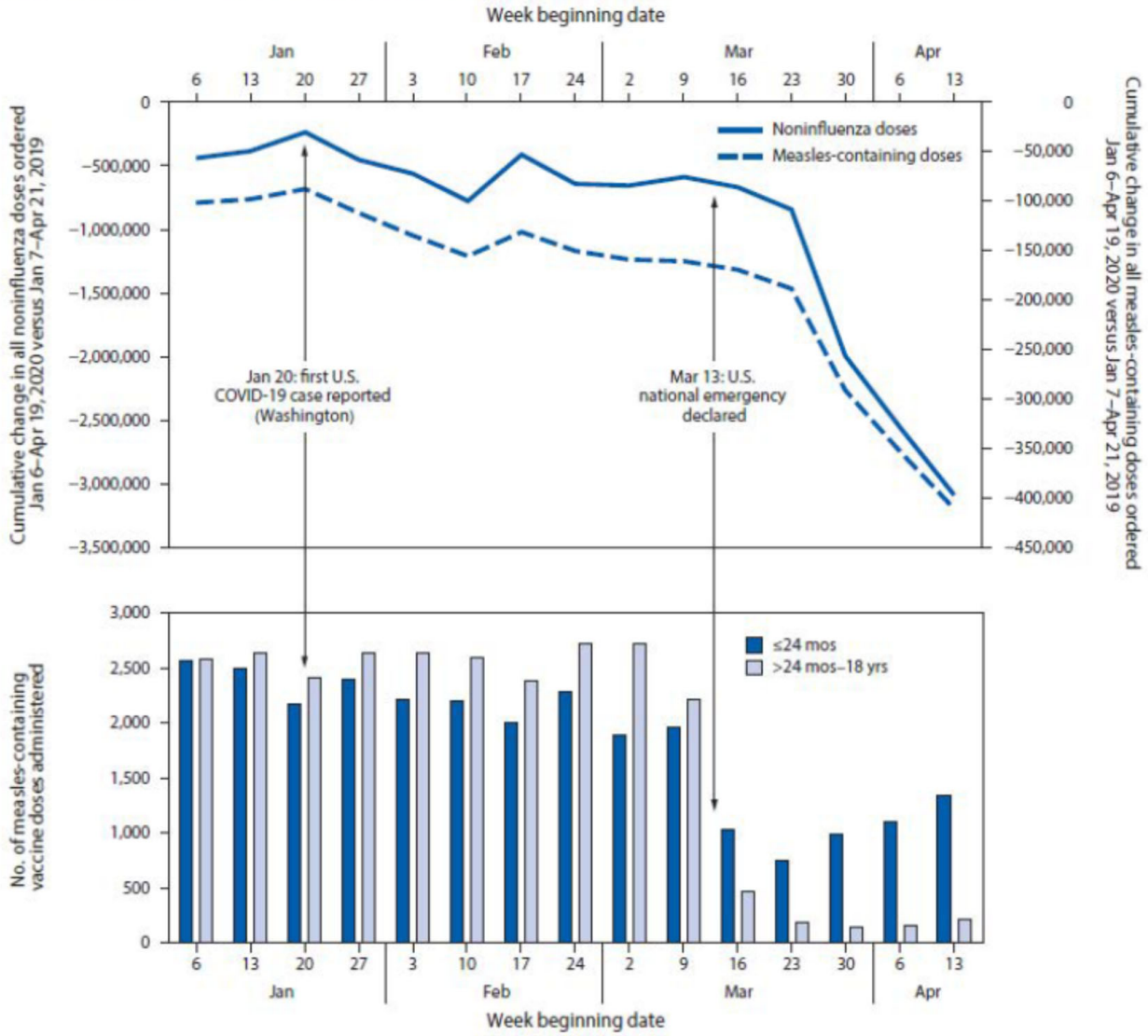
*Infant Mortality Rate
(Deaths per 1000 live births)

We have no specific data on the trend in SIDS deaths during the pandemic. We have, however, heard anecdotal reports from emergency room (ER) doctors suggesting some have observed a decline in SIDS. One group of doctors who might see 3 cases of SIDS in a typical week has seen zero cases since the pandemic and associated lockdowns began.

What has changed during this period that might have such an effect? Are infant deaths not being recorded? Are parents taking better care of their families while working remotely and their children are not going to school? There are many possible hypotheses about the infant death decline.

One very clear change that has received publicity is that public health officials are bemoaning the sharp decline in infant vaccinations as parents are not taking their infants into pediatric offices for their regular well-baby checks. In the May 15 issue of the CDC Morbidity and Mortality Weekly Report (MMWR), a group of authors from the CDC and Kaiser Permanente reported a sharp decline in provider orders for vaccines as well as a decline in pediatric vaccine doses administered. [8] These declines began in early march, around the time infant deaths began declining.

FIGURE. Weekly changes in Vaccines for Children Program (VFC) provider orders* and Vaccine Safety Datalink (VSD) doses administered† for routine pediatric vaccines — United States, January 6–April 19, 2020



* VFC data represent the difference in cumulative doses of VFC-funded noninfluenza and measles-containing vaccines ordered by health care providers at weekly intervals between Jan 7–Apr 21, 2019, and Jan 6–Apr 19, 2020.
† VSD data depict weekly measles-containing vaccine doses administered by age group (age ≤24 mos and >24 mos–18 yrs).

This effect may not be confined to the U.S. The World Health Organization issued a press release on May 22 noting that, “Since March 2020, routine childhood immunization services have been disrupted on a global scale that may be unprecedented since the inception of expanded programs on immunization (EPI) in the 1970s.” [9]Are fewer children dying because their parents are skipping their routine childhood vaccines? If lives are being saved during the pandemic, this is a question that urgently needs answering.

* * *

Covid19 is unique among recent pandemics in that the mortality toll is measurable, real and convincing. It is also nearly certain to be transitory, but that won’t stop the propaganda juggernaut from rolling forward. However, as the saying goes, “the best laid plans of mice and men often go awry.” What no one would have predicted in advance of Covid19 is that the extreme lockdown response has produced a natural experiment that actually calls into question the very actions—widespread, mandated vaccines for all--that the infectious disease and public health community have been pushing for years. We should mourn the deaths of the elderly Manhattan nursing home residents but also take heed of the hundreds of avoided infant deaths. Only with that kind of balance will we draw the proper lessons from the pandemic and the lockdowns that have followed in its wake.

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3. —. Provisional COVID-19 Death Counts by Sex, Age, and Week. [Online] [Cited: June 6, 2020.] https://data.cdc.gov/NCHS/Provisional-COVID-19-Death-Counts-by-Sex-Age-and-W/vsak-wrfu.

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Endnotes:

The Centers for Disease Control and Prevention note the following regarding underreporting in most recent weeks. To ensure that the signals we are reporting are not the result of these reporting lags, we have deliberately excluded the most recent four weeks of available data (the charts are week ending May 16, 2020, pulled June 6). Because CDC also re-states historical data every time they refresh their datasets, we also refreshed all reported data for two prior years with every weekly dataset update.

> *Provisional counts are weighted to account for potential underreporting in the most recent weeks. However, data for the most recent week(s) are still likely to be incomplete. Only about 60% of deaths are reported within 10 days of the date of death, and there is considerable variation by jurisdiction and age. The completeness of provisional data varies by cause of death and by age group. However, the weights applied do not account for this variability. Therefore, the predicted numbers of deaths may be too low for some age groups and causes of death. For example, provisional data on deaths among younger age groups is typically less complete than among older age groups. Predicted counts may therefore be too low among the younger age*

groups. More detail about the methods, weighting, data, and limitations can be found in the Technical Notes.

Infant deaths did not decrease during the pandemic due to a reduced use of vaccines; vaccines are not associated with sudden infant death syndrome

CLAIM

Vaccines are a cause of sudden infant death death syndrome; infant deaths decreased dramatically during the lockdown, when the number of vaccines administered was reduced

VERDICT

MISLEADING

DETAILS

Lacks context: The claim that child deaths decreased significantly during the pandemic is based on incomplete data. Deaths in the U.S. are reported to the CDC only after death certificates are received by local health authorities, which can take weeks to months. The most recent CDC data therefore always underreport the most recent deaths. The authors of the article did not sufficiently account for this underreporting in their analysis.
Misrepresents a complex reality: The article compares only pediatric vaccine uptake during the pandemic to child deaths and does not consider the many other factors which may have contributed to the recent decline in child deaths, such as lockdowns leading to reduced travel and social contact, culminating in fewer traffic accidents and infectious diseases, respectively.

KEY TAKE AWAY

Vaccines are safe and scientific studies have found no association between vaccination and sudden infant death syndrome (SIDS). Blaxill and Becker's report is based on incomplete data, as they did not account sufficiently for the lag time that occurs between a death and its reporting to the U.S. CDC. Their findings that child deaths have significantly decreased compared to previous years are therefore spurious and premature. The duo also failed to account for other factors which may have contributed to changes in child mortality, such as stay-at-home orders, which would have limited the spread of other infectious diseases besides COVID-19.

FULL CLAIM: Vaccines are a cause of sudden infant death death syndrome; infant deaths decreased dramatically during the lockdown, when the number of vaccines administered was reduced

REVIEW

An article published by Health Choice which suggests a link between infant deaths and vaccination has been republished by outlets known for opposing vaccines, such as Children's Health Defense. The original article has received more than 14,000 interactions on social media, including Facebook and Twitter. In addition, posts based on this article, many accompanied by a screenshot of a headline that suggests a link between vaccines and sudden infant death syndrome (SIDS) (example), have also been circulating on Facebook.

The Health Choice article, written by Mark Blaxill—a member of Health Choice and an anti-vaccine activist—and Amy Becker, claims that fewer children have died during the COVID-19 pandemic and suggests that this is due to the concurrent reduced uptake of pediatric vaccines. To determine the veracity of their claims, we examine what factors could have contributed to the lower mortality seen among children and the data that Blaxill and Becker presented in their article.

Blaxill and Becker introduce their article as an exercise in "just asking questions" about "Are fewer children dying because their parents are skipping their routine childhood vaccines?", which strongly implies that the reduced number of child deaths is due to a reduced uptake of pediatric vaccines. They cite a 15 May 2020 *Morbidity and Mortality Weekly Report (MMWR)*[1] published by the CDC, as well as a World Health Organization press release, which both report a declining uptake in pediatric vaccines during the pandemic.

This is accurate. Due to lockdowns and concerns over disease spread in the U.S., many parents have been reluctant to take their children to a doctor for routine immunization and many doctors have also not been able to continue routine office visits due to restrictions on travel or the need to redeploy for COVID-19 responses. However, the authors' approach is misleading because it fails to consider the large impacts of the many changes to daily life that have occurred due to the pandemic, which also may have factored into changes in the number of child deaths.

David Gorski, professor of surgery at Wayne State University and editor of Science-Based Medicine, pointed out that stay-at-home orders may have curbed the spread of other potentially deadly infectious diseases besides COVID-19, which young children might otherwise have caught at nurseries and daycare centers. Indeed, among the CDC's 2018 list of the ten leading causes of death among children younger than a year old are bacterial sepsis, which is a result of infection, and respiratory distress, which can also be caused by infection. Furthermore, he also highlighted "the huge decline in miles driven in automobiles, which likely resulted in a decline in deaths due to auto collisions."

Finally, the data used by the two authors do not provide any information regarding the causes of death involved in child deaths during 2020. Hence the implication that the variation observed is due to reduced uptake of vaccination is simply cherry-picking and not supported by scientific evidence. The Facebook posts claiming that "SIDS deaths dropped dramatically" during the pandemic are baseless, since Blaxill and Becker did not identify the causes of death among child deaths during 2020, nor would they have been able to do so with their methods.

Scientific studies have demonstrated that vaccines are not associated with SIDS, some of which can be found at the Vaccine Education Center of the Children's Hospital of Philadelphia[2-5]:

"Since immunizations are given to about 90 percent of children less than 1 year of age, and about 1,600 cases of SIDS occur every year, it would be expected, statistically, that every year about 50 cases of SIDS will occur within 24 hours of receipt of a vaccine. However, because the incidence of SIDS is the same in children who do or do not receive vaccines, we know that SIDS is not caused by vaccines."

A 2013 safety review of the childhood immunization schedule conducted by the U.S. Institute of Medicine, which included examining a potential link between SIDS and multiple vaccines, found that the evidence showed no association between the two[6]. Some studies have also observed a reduced rate of SIDS among vaccinated children[7,8]. Vaccines have been monitored for safety over decades and the scientific evidence strongly supports their track record of safety.

Examining the analysis by Blaxill and Becker, we found that they attempted to provide evidence for their claim by using the total number of deaths from all causes for individuals younger than 18 years old. This information can be extracted from the CDC's National Center for Health Statistics (NCHS) Mortality Surveillance System for pneumonia and flu mortality, as well as the provisional COVID-19 death counts also released by the CDC, which provides further age group stratification among children (under 1 year old; 1 to 4 years old; 5 to 14 years old).

They claim to have observed that "Starting in early March, expected deaths began a sharp decline, from an expected level of around 700 deaths per week to well under 500 by mid-April and throughout May" and that "roughly 30% fewer children died." The figure below is from their article.

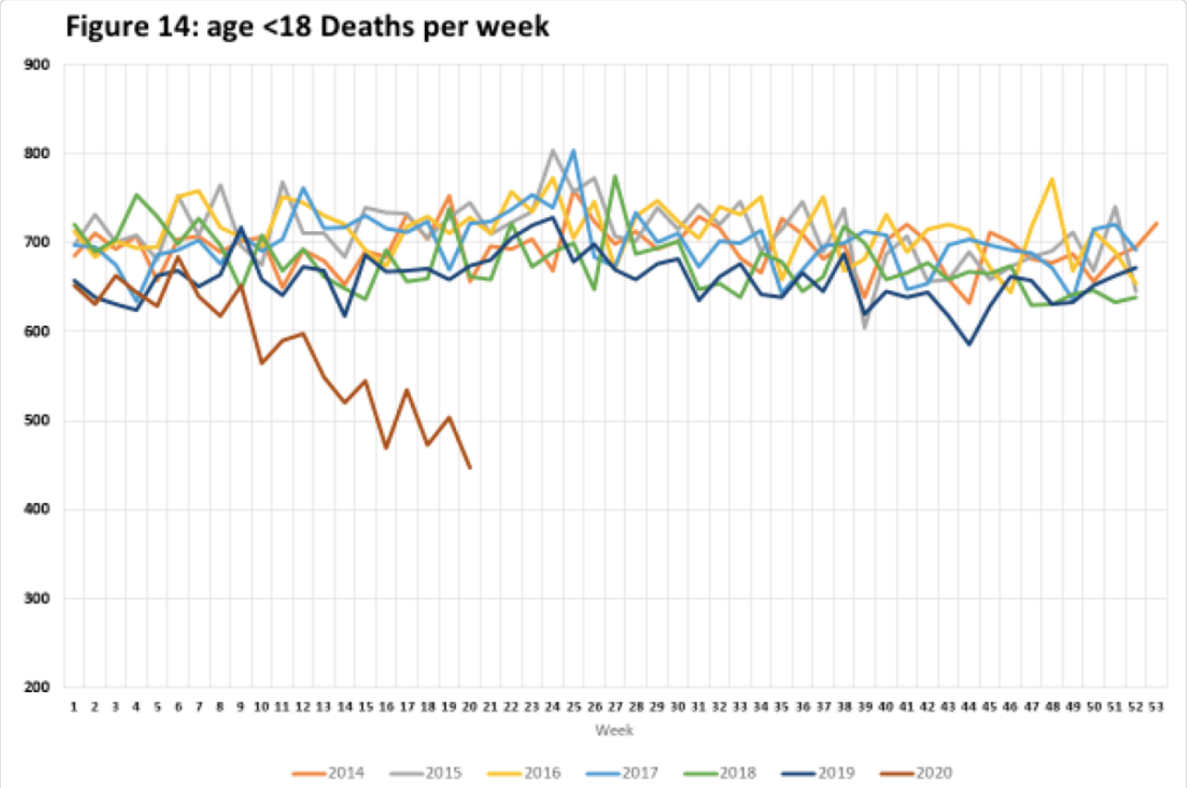

Figure 1. Graph from Blaxill and Becker's article showing the total number of deaths from all causes among individuals younger than 18 years old in the U.S by week. According to the article, this dataset, which was extracted on 6 June 2020, comes from the NCHS Mortality Surveillance System for pneumonia and flu mortality, which also provides statistics for overall all-cause death.

However, a caveat to using the NCHS mortality data is the lag time between a death and its inclusion among the NCHS data, as stated here: “The data presented each week are preliminary and may change as more data is received.”

This lag time is due to several reasons, as the CDC’s page for provisional COVID-19 deaths explains:

> - *Death certificates take time to be completed. There are many steps to filling out and submitting a death certificate. Waiting for test results can create additional delays.*
> - *States report at different rates. Currently, 63% of all U.S. deaths are reported within 10 days of the date of death, but there is significant variation between states.*
> - *It takes extra time to code COVID-19 deaths. While 80% of deaths are electronically processed and coded by NCHS within minutes, most deaths from COVID-19 must be coded by a person, which takes an average of 7 days.*

Blaxill and Becker claim to have accounted for this lag time, stating in their endnotes that “To ensure that the signals we are reporting are not the result of these reporting lags, we have deliberately excluded the most recent four weeks of available data”, adding that they obtained their data on 6 June 2020 and only included data up to 16 May 2020 in their analysis, thereby excluding a period of about three weeks.

However, the NCHS has also stated that the lag time “can range from 1 week to 8 weeks or more, depending on the jurisdiction and cause of death.” Therefore, the authors’ exclusion of three weeks may not have been sufficient to fully account for the lag time. Hence their conclusion that deaths among those younger than 18 years old decreased during the pandemic is most likely premature.

In fact, we can demonstrate that the article’s report is affected by underreporting simply by analyzing the same dataset used by Blaxill and Becker, which has been updated by the NCHS since their analysis. See Health Feedback’s analysis of the more recent data in the following figure.

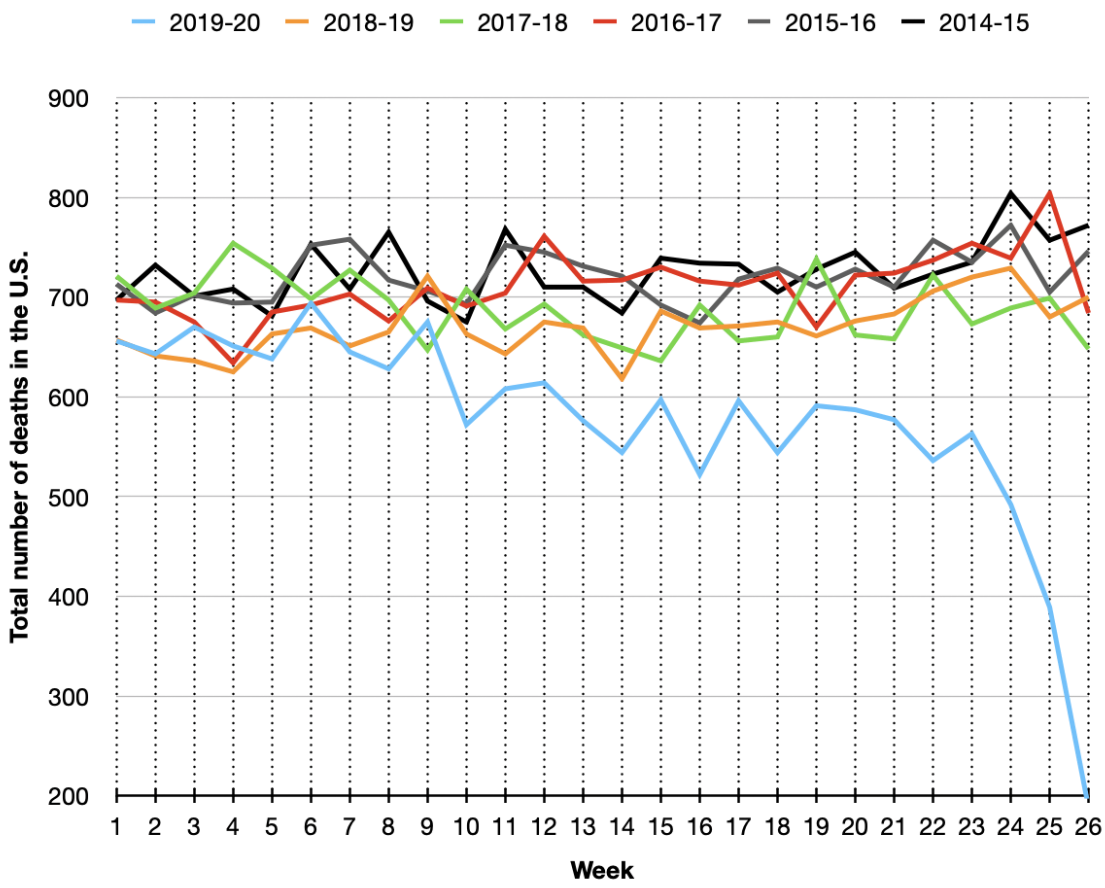

Figure 2. Total number of deaths from all causes per week in the U.S. among individuals younger than 18 years old. As with Figure 1, the data was extracted from the NCHS Mortality Surveillance System for pneumonia and flu mortality, obtained on 13 July 2020. Deaths are charted for each flu season. The flu surveillance system considers a flu season for a year to begin on week 40 of that year and to end on week 39 in the following year. Week 26 ends on 27 June 2020 and is part of the 2019 flu season. Note the marked decrease in deaths as the chart approaches more recent weeks, an indication of the lag time.

The total number of deaths from all causes determined using the more recent data (Figure 2) is higher than the number reported in the article (Figure 1) beginning around week 9. Our more recently updated numbers place mortality figures for the time period that Blaxill and Becker analyzed at between 500 and 600, whereas the figures in the article trend lower, between 400 and 500. It is likely that these numbers will continue to increase as they are updated over time.

The difference between our numbers and the article's is most likely due to underreporting of deaths, which the authors did not completely account for. Therefore, Blaxill and Becker's claim that fewer children have died during the pandemic is drawn from incomplete data, and deaths did not decline to the extent described in the article.

Blaxill and Becker then attempted to determine which age groups experienced the largest reductions in deaths in the first several months of 2020. They did this by examining the total number of U.S. deaths from all causes reported among children in the CDC's provisional COVID-19 counts (see Figure 3 below). In terms of the observed changes in numbers of child deaths, they concluded that "There was very little effect among school age children or adolescents" and that "Virtually the entire change came from infants."

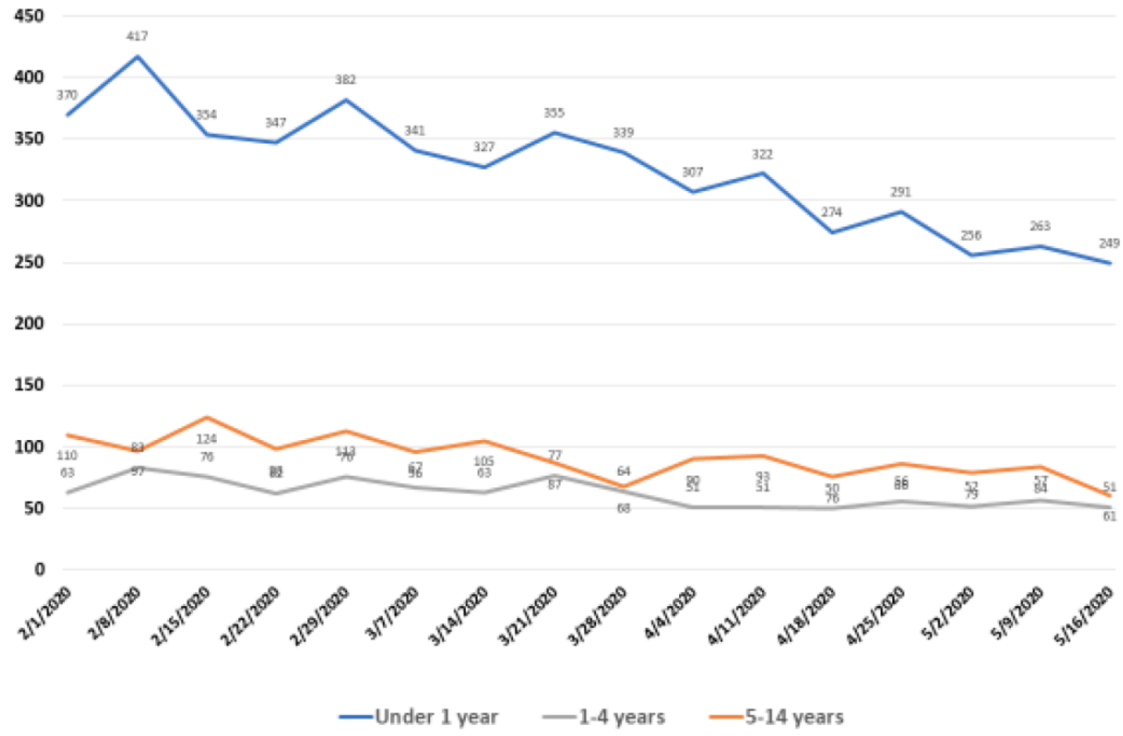

Figure 3. Graph from Blaxill and Becker's article showing the total number of deaths from all causes among children in the U.S by age group and week. According to the article, the data was extracted from the CDC's provisional COVID-19 death counts on 6 June 2020.

However, this graph is misleading and its interpretation is inaccurate. Gorski explained:

> "*So, from between the week of February 1 and May 16, the number of deaths of infants under 1 year old fell from roughly just under 400 a week to around 250 a week, a greater than 35% decline. But what about Becker and Blaxill's claims that there was 'very little' effect among school age children or adolescents? As an absolute number, that's sort of true, but as a percentage? Not so much. Again, look at the graph. Between the weeks of February 1 and May 16, deaths of children 5-14 years old fell from over 100/week to roughly 75 a week, a fall of close to 25%, not much less than that among infants. During the same time period, among children aged 1-4 years, the number of deaths fell from around 70-90 a week to 50-60 a week, a similar decline.*"

Skeptical Raptor, a website that addresses vaccine misinformation and pseudoscience, also highlighted that among those aged five to 14 years old, the decline is actually even more pronounced compared to the decline observed among those under a year old, standing at 110 at the beginning of the year and 51 at the last data point (on 16 May 2020)—a 46% decrease, which is much larger than the percentage change (~30%) for those under a year old. Yet Blaxill and Becker do not acknowledge this difference in their article.

Similar to Figure 1, the numbers used by the duo in Figure 3 are also affected by underreporting. Health Feedback obtained the same dataset used by Blaxill and Becker, but updated to include the most recent data as of 13 July 2020 instead of 6 June 2020, and plotted the numbers below (Figure 4). For the same time period that the duo analyzed, from 1 February to 16 May 2020, our more recently updated numbers of deaths are higher than those reported in the article.

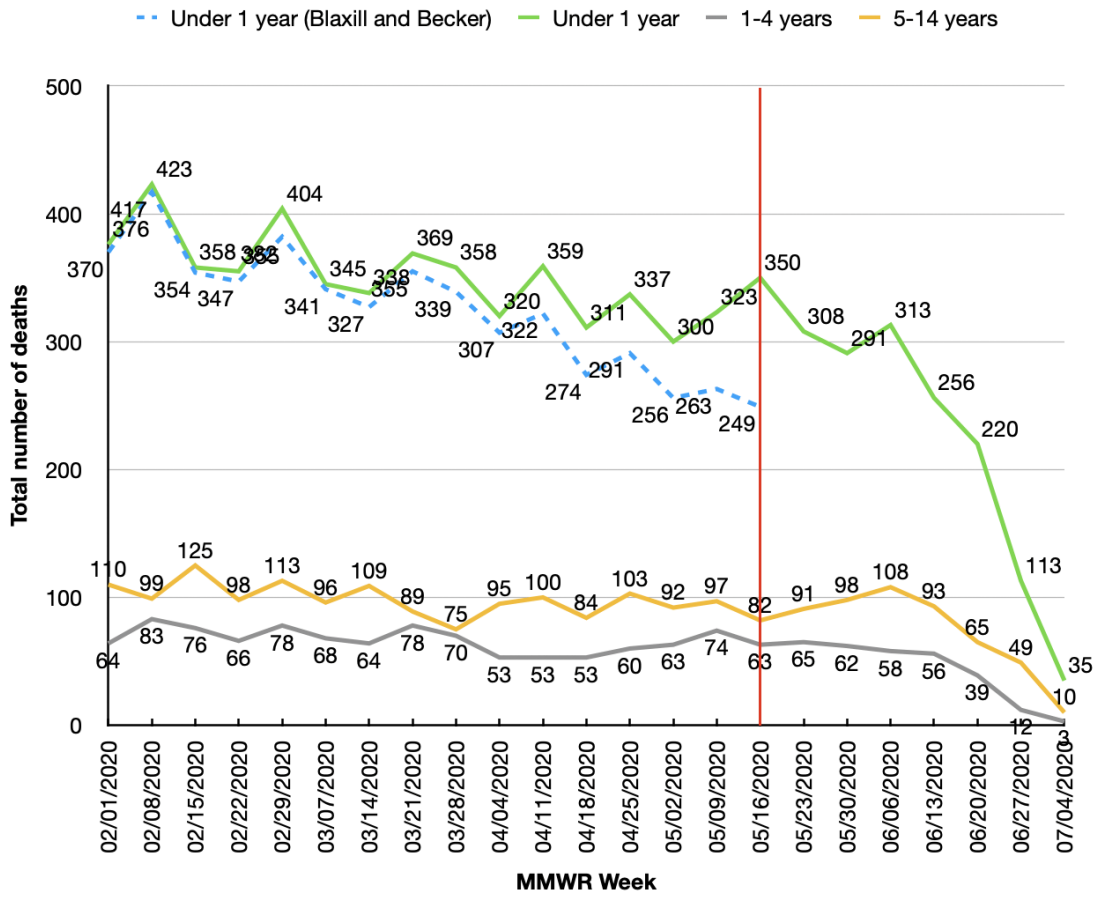

Figure 4. The total number of deaths from all causes in the U.S. among children, categorized by age group, obtained from the CDC's provisional COVID-19 death counts on 13 July 2020. The dotted line in blue charts the death count for infants as per Blaxill and Becker's article. Note that the more recent counts (in green) are higher compared to the earlier counts (in blue) for the same time period. The red line indicates the last date recorded in the graph (Figure 3) by Blaxill and Becker.

Overall, Blaxill and Becker's claims are premature because they are based on incomplete data due to underreporting. Scientific evidence has demonstrated that vaccines are safe, are not associated with SIDS, and essential to protecting children from potentially deadly infectious diseases such as measles.

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Vaccine

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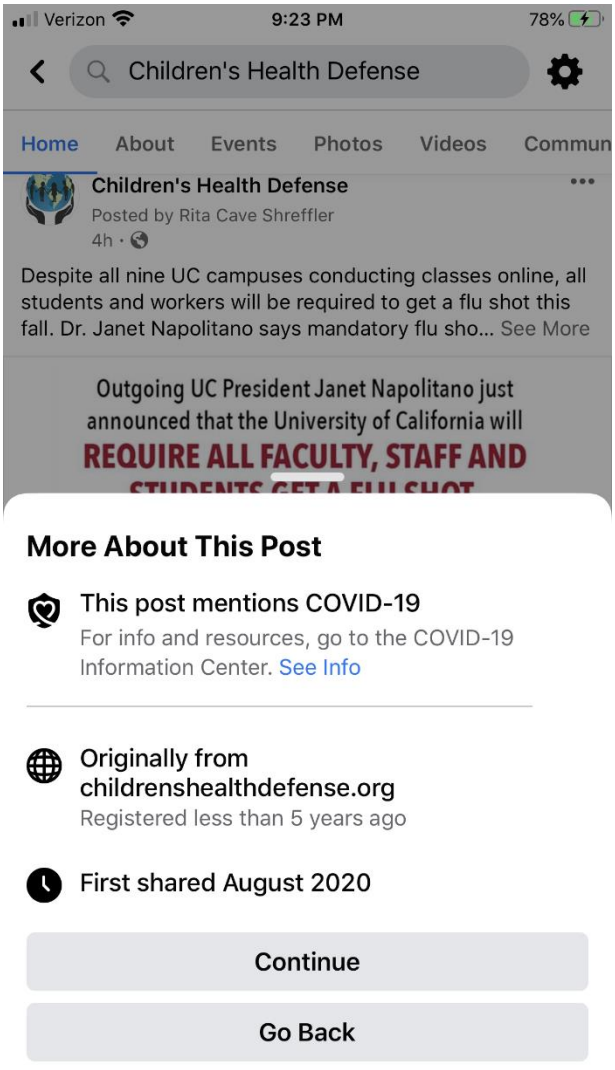
Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

CA Flu Vaccine (September 2, 2020)

CHD Article:

https://childrenshealthdefense.org/news/chd-sues-the-university-of-california-over-mandatory-flu-vaccine-policy/

Facebook's Overlay:



August 13, 2020

CHD Will Sue the University of California Over Mandatory Flu Vaccine Policy

By Robert F. Kennedy, Jr., Chair, Children's Health Defense

Dr. Janet Napolitano says mandatory flu shots will "lessen the chance of being infected with COVID." However, prevailing research suggests that flu vaccines actually raise the risk from coronavirus infection.

A January 2020 US Pentagon study (Wolff 2020) found that the flu shot INCREASES the risks from coronavirus by 36%. "Receiving influenza vaccination may increase the risk of other respiratory viruses, a phenomenon known as "virus interference…'vaccine derived' virus interference was significantly associated with coronavirus…"

Many other studies suggest the increased risk of viral respiratory infections, including coronavirus, following vaccination for influenza.

- A 2018 CDC study (Rikin et al 2018) found that flu shots increase the risk of non-flu acute respiratory illnesses (ARIs), including coronavirus, in children.
- A 2011 Australian study (Kelly et al 2011) found that flu shots doubled the risk for non-flu viral lung infections.
- A 2012 Hong Kong study (Cowling et al 2012) found that flu shots increase the risk for non-flu respiratory infections by 4.4 times.
- A 2017 study (Mawson et al 2017) found vaccinated children were 5.9 times more likely to suffer pneumonia than their unvaccinated peers.

Children's Health Defense is aware of a contrary study published last month by Gunther Fink et. al. That report appears to conclude that flu vaccines may be prophylactic against coronavirus. The study, of Brazilian populations, has many dubious unexplained outcomes including a 47% death rate among study subjects, raising numerous unanswered questions about the methodology and validity of this research. UC campuses should not be encouraging flu shots until we have unambiguous science supporting efficacy against COVID.

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Polio (September 3, 2020)

CHD Article

https://childrenshealthdefense.org/news/polio-vaccine-causing-polio-outbreaks-in-africa-who-admits/

Science Feedback Article:

https://healthfeedback.org/claimreview/adequate-immunization-and-improved-sanitation-together-protect-against-infection-from-both-wild-and-vaccine-derived-poliovirus/

September 03, 2020

Polio Vaccine Causing Polio Outbreaks in Africa, WHO Admits

By the Children's Health Defense Team

A year ago, news outlets briefly shone a light on the fact (a fact that makes public health officials squirm) that oral polio vaccines are causing polio outbreaks. With reports streaming in throughout 2019 regarding the circulation of vaccine-derived polioviruses in numerous African and Asian countries, a CDC virologist confessed, "We have now created more new emergences of the virus than we have stopped."

… there were 400 recorded cases of vaccine-derived polio in more than 20 countries worldwide.

This week, the same story is making the same headlines, with the WHO's shamefaced announcement that the oral polio vaccine is responsible for an alarming polio outbreak in Sudan—"linked to an ongoing vaccine-sparked epidemic in Chad"—with parallel outbreaks in a dozen other African countries. In fact, between August 2019 and August 2020, there were 400 recorded cases of vaccine-derived polio in more than 20 countries worldwide. Ironically, WHO disclosed this "setback" barely a week after it declared the African continent to be free of wild poliovirus—which has not been seen in Africa since 2016. While African epidemiologists cheerily claim that these outbreaks can "be brought under control with further immunization," and Sudan prepares to launch a mass polio vaccination campaign, WHO is warning that "the risk of further spread of the vaccine-derived polio across central Africa and the Horn of Africa" is high.

The Gates Foundation is a leading funder of oral polio vaccination in Africa and around the world, having dedicated nearly $4 billion to such efforts by the end of 2018. As discussed in *Forbes* in May 2019, Gates has "personally [driven] the development" of new oral polio vaccines and plays a "strategic role beyond funding." The *Forbes* author (who partners with Gates on polio initiatives) states:

> *The work on the [polio] vaccine changes the direction of the light on Gates and the Foundation, shifting the view from philanthropist to social entrepreneur. The Foundation . . . isn't merely a grant-making organization but also an innovation engine.*

Clearly, the outcome of these "innovations"—hundreds of new cases of polio a year—warrants a closer look.

Related articles from Children's Health Defense:

Polio vaccination—still causing polio after all these years (September 24, 2019)

What polio vaccine injury looks like, decades later (September 5, 2019)

The non-polio illness that "looks just like polio" (October 16, 2018)

Read the fine print, part two—nearly 400 adverse reactions listed in vaccine package inserts (August 14, 2020)

WHO experimenting on African children without informed consent (March 3, 2020)

Most of you think we know what our vaccines are doing—we don't (May 7, 2019)

News articles about current outbreaks:

UN says new polio outbreak in Sudan caused by oral vaccine (September 2, 2020)

BREAKING! UN AND WHO finally admits that the new polio outbreak in Sudan and elsewhere in Africa is caused by a oral polio vaccine gone wrong (September 2, 2020)

Vaccine-derived polio spreads in Africa after defeat of wild virus (September 2, 2020)

Polio spreads in Sudan (August 26, 2020)

Polio reported in Port Sudan (August 20, 2020)

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Adequate immunization and improved sanitation together protect against infection from both wild and vaccine-derived poliovirus

CLAIM

"UN Forced to Admit Gates-funded Vaccine is Causing Polio Outbreak in Africa"

VERDICT

INACCURATE

DETAILS

Inaccurate: The oral polio vaccine contains a live but weakened form of the poliovirus that cannot cause the disease. In fact, virus shedding from vaccinated children can confer partial protection to unvaccinated children around them. The viruses that cause vaccine-derived polio cases are different from that contained in the oral polio vaccine, and arise only on very rare occasions in areas with poor sanitation.
Lacks context: The article fails to explain that vaccine-derived polio cases occur only in individuals who are not vaccinated, and that the number of polio cases derived from the oral vaccine is much lower than the number of cases caused by the wild poliovirus before the oral vaccine was available.

KEY TAKE AWAY

The oral polio vaccine contains a live but weakened form of the poliovirus, which does not cause infection. In areas with poor sanitization, however, the virus shed by vaccinated children can remain in the environment for long periods of time, and on rare occasions, regain its ability to cause disease. Since immunization protects against both the wild poliovirus and vaccine-derived polioviruses, full vaccination of 80-85% of the children can confer herd immunity and stop polio transmission. And improved sanitation can prevent the emergence of infectious vaccine-derived poliovirus strains.

FULL CLAIM: “UN Forced to Admit Gates-funded Vaccine is Causing Polio Outbreak in Africa"; “The United Nations has been forced to admit that a major international vaccine initiative is actually causing a deadly outbreak of the very disease it was supposed to wipe-out.”

REVIEW

Articles like this one, published on 4 September 2020 on *21st Century Wire*, report an outbreak of 13 cases of vaccine-derived polio that began in Sudan in March 2020 and was announced by the Sudan Federal Ministry of Health just one week after the World Health Organization (WHO) declared Africa free of the wild strain of the poliovirus. These articles claim that the “international [polio] vaccine initiative is actually causing a deadly outbreak of the very disease it was supposed to wipe out”, suggesting that polio vaccination campaigns have been ineffective at preventing the disease. Based on this polio outbreak, these posts also question “the efficacy and safety of the much-hype[d] COVID[-19] miracle vaccine.” According to the social media analytics tool CrowdTangle, these posts received more than 18,000 interactions on Facebook in three days, primarily from Facebook groups that oppose vaccines and those known to promote conspiracy theories.

Contrary to what the posts suggest, vaccination has been effective in eradicating polio from the vast majority of developing countries, preventing an estimated 16 million casesand 1.5 million deaths worldwide. While vaccine-derived polio cases do occur, they are very rare and can be avoided by improving sanitation and vaccine coverage in vulnerable communities.

Poliomyelitis (polio) is caused by a viral infection that generally results in mild symptoms, but can sometimes lead to paralysis or death if the virus reaches the brain and spinal cord. Because the virus replicates in the intestine, infected people can shed infectious particles into the environment for several weeks via their feces. Thus, in areas with poor sanitation, the infection can rapidly spread through the community by fecal contamination of drinking water or food grown or prepared with contaminated water.

Two types of polio vaccines are currently in use. The first is the inactivated poliovirus vaccine (IPV), which contains a “killed” virus. This injectable vaccine is more expensive than the oral vaccine and requires sterile equipment and trained healthcare staff to administer a total of four doses. Although the IPV is effective in generating antibodies and protecting against paralysis, it induces only limited immunity in the intestine. This means that the virus can still multiply in the gut and be shed in the feces. In areas with poor sanitation systems, individuals are at risk of coming into contact with potentially infectious viral particles. This is especially problematic in regions with low immunization rates[1].

The second type of vaccine is the oral poliovirus vaccine (OPV), which is less expensive than the IPV and easier to administer through drops taken by mouth in three doses. The article mentions that this vaccine contains a live virus, but fails to clarify that the virus used in the vaccine is a weakened (attenuated) strain of the virus incapable of causing infection. In areas with poor sanitization, vaccinated children shed this weakened virus in their stool and can passively confer herd immunity to others around them. However, the shed vaccine virus can also persist for long periods of time in the environment and sometimes undergo mutations. On rare occasions, the virus regains its capacity to cause disease, turning into vaccine-derived polioviruses (VDPVs).

The *21st Century Wire* article states that the first two children who became paralyzed in Sudan in the spring of 2020 “had been recently vaccinated against polio”. This statement is misleading as it suggests that the polio vaccine caused the paralysis in these children, which is incorrect. Those children were 48 and 36 months old, which means that they had not completed the immunization

schedule yet and were thus vulnerable to the disease. Testing confirmed that the children were not infected by the strain of virus contained in the vaccine but by a VDPV that originated in Chad and had been circulating there since 2019. Contrary to what the article suggests, VDPVs are different from the virus contained in the oral vaccine. As explained in this previous review by Health Feedback, VDPVs can only spread in communities with low immunization.

Far from covering up vaccine-derived polio outbreaks as the *21st Century Wire* headline suggests, the WHO regularly reports on new polio outbreaks and the type of virus causing it. Since vaccination protects against both VDPVs and wild polioviruses, the solution to vaccine-derived polio outbreaks is to extend immunization coverage, according to Dr. Pascal Mkanda, head of the WHO's Polio Eradication Programme: "The rise in vaccine-derived polio cases is caused by a mutated form of the disease found in faecal matter that targets children who have not been vaccinated. What we must do is extend the coverage of immunisation so that polio can no longer continue to survive."

Finally, many posts associate the participation of the Bill & Melinda Gates Foundation in the Global Polio Eradication Initiative (GPEI), which launched the polio vaccination campaigns, with the alleged dangers of the OPV in order to cast doubt on coronavirus vaccines. The article further claims that an experimental COVID-19 vaccine is being tested on the African population. These claims are inaccurate and misleading. Firstly, the clinical trial in Africa involves a COVID-19 vaccine that has already been proven safe in more than 1,000 healthy volunteers from the U.K.[2]. The vaccine is now in phase III trials, which means that researchers are assessing its efficacy at preventing infection. Secondly, the occurrence of vaccine-derived outbreaks does not suggest that the polio eradication initiative has failed.

While vaccine-derived polio cases currently exceed wild poliovirus cases, this is only because polio vaccination campaigns have eradicated the wild virus from the vast majority of countries. Only one of the three original strains of wild poliovirus remains. In contrast to the estimated 350,000children paralyzed by polio in 1988, which is the year when the GPEI launched the vaccination program, the WHO reported only 539 polio cases worldwide in 2019. In the absence of the oral vaccine, the virus could have paralyzed more than 6.5 million children in the past ten years.

In summary, the attenuated poliovirus contained in the oral polio vaccine does not cause the disease. However, when the shed virus circulates in the environment for long periods of time, it can mutate into a virulent form which is especially dangerous in underimmunized communities. It is true that VDPV outbreaks currently represent a big obstacle in the eradication of polio, however maintaining good immunization coverage will protect against polio transmission regardless of the origin of the virus.

REFERENCES

- 1 – Parker et al. (2015) Impact of inactivated poliovirus vaccine on mucosal immunity: implications for the polio eradication endgame. Expert Reviews.
- 2 – Folegatti et al. (2020) Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial. Lancet

Polio Vaccine

Published on: 10 Sep 2020 | Editor: Iria Carballo-Carbajal

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Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

Covid Testing (September 14, 2020)

CHD Article Posted:

https://childrenshealthdefense.org/news/covid-19-testing-pcr-a-critical-appraisal/

Science Feedback Article:

https://healthfeedback.org/claimreview/misinterpreted-new-york-times-report-leads-to-false-claim-that-the-number-of-covid-19-cases-in-the-u-s-is-inflated-by-up-to-90/

September 14, 2020

CoVID-19 Testing PCR – A Critical Appraisal

By

Bose Ravenel, M.D., F.A.A.P., Retired

Postulate:

The standard testing for CoVID-19 utilizes a technology that its discoverer warned should never be used for diagnosis. This technique, known as PCR, has led to massively inaccurate and misleading conclusions. Public health authorities currently are basing societal mitigation policies and recommendations almost exclusively upon this technology by tracking putative numbers of "cases" instead of deaths and hospitalizations, and the result is an unprecedented negative impact upon society that is futile and unnecessary. It is futile in the naïve assumption that SARS CoV-2 can be contained in the population and unnecessary since deaths and hospitalizations and attendant consequences therefrom are back to pre-pandemic levels. It is imperative that tracking data upon which ongoing mitigation practices rest revert back to accurate figures for deaths and hospitalizations from CoVID-19.

Personal Disclosure:

I am a recently retired pediatrician after 33 years in private pediatric practice, 11 years as a faculty member of a major University Department of Pediatrics serving in a community Pediatric Residency training program, and have been practicing pediatric Integrative Medicine for 6 ½ years. During this Integrative Medicine time, my patients were predominantly those with autoimmune diseases, chronic Lyme disease, and autism spectrum disorders. I have no experience with diagnosing or treating CoVID-19 in patients. My training and experience have, however, provided me a vast experience sorting out often conflicting and equally credible appearing narratives about chronic diseases and the immune system. By virtue of the foundational role of the immune system in children with the kinds of complex, chronic health aforementioned conditions, I have studied the immune system and its role in recovery or otherwise from these chronic and disabling conditions intensively over the past seven years or so.

Being a resident of a retirement community myself and a member of a high-risk group for CoVID-19, along with a suddenly accelerated time frame for my planned retirement due to a shut-down from outside exposure in the retirement community, I have invested hundreds of hours into researching everything CoVID since March 16, 2020.

Background

CoVID-19 became a household word in the United States in March, 2020 when the pandemic became manifest. Needless to say, it has affected every person living, as well as all our institutions, businesses, activities, and the overall economy in ways that were unimaginable.

During the initial few weeks of the pandemic in our country, the scope and apparent seriousness of what was unfolding was unprecedented and with reports of over-running of hospitals and large numbers of deaths in select high-density urban populations (Wuhan, China, New York City, etc) the initial response that included widespread shutdowns and the other well-known mitigation measures were justified.

Following a massive shifting of resources, extreme mitigation in the form of shutting down businesses, physical distancing, mask wearing, and other measures, the anticipated and feared massive over-running of hospitals' ability to manage the CoVID-19 case load became manageable, and after the first six weeks or so, in most of the smaller communities across the country, shutting down hospital and medical office usual procedures and medical care led to both unexpectedly low medical utilization overall, personnel layoffs, and widespread adverse impact upon normal usual healthcare, thus over time adding to "collateral damage" in the form of missed medical treatment for non-CoVID health conditions, etc. Even makeshift hospitals created from conversion of other facilities to hastily constructing new ones ended up not being needed for CoVID patients and not utilized.

Initially the primary driver of public health recommendations and policies were data for hospitalizations and deaths from CoVID-19. During this initial phase, before the ultimate magnitude of the problem could be determined, the difficult and painful measures of shutting-down businesses, schools, and restrictions of personal liberties for the greater good of public health and safety were justified as being of finite duration, expected to be a matter of up to six weeks or so in order to "flatten the curve" of the rapid acceleration of the virus and its effects – not to be followed indefinitely.

He warned against this technique ever being used for diagnosis …

As diagnostic testing became available, tracking with all three of these measures was followed. After the first six weeks or so, high density urban areas that were hit hard in the

beginning did experience "flattening the curve" and most other communities were spared the once-feared massive over-run of their ability to deal with the caseload of sick CoVID-19 patients.

Testing that was adopted and became the basic form of diagnostic lab test was that based upon Polymerase Chain Reaction (PCR), a technology discovered by Kary Mullis, who was awarded the Nobel Prize in 1993 for this discovery. Although Mullis died in 2019 before the beginning of the CoVID-19 pandemic, he had much to say about PCR. *He warned against this technique ever being used for diagnosis due to the complexity of the process and because of a relatively high rate of false positive results if performed on asymptomatic individuals, as well as with false negative results. He pointed out, among other things, that PCR required selecting a particular number of "amplifications" or multiplications of the original tiny string of genetic material (DNA), and that the cutoff between "positive" and "negative" was arbitrary and could vary from place to place or over time*.

Now, *six months* into the pandemic, the most accurate measure of deaths, IFR (Infection Fatality Ratio) has declined to a range that is within the bounds of deaths attributed to seasonal influenza in moderate to severe years. Physicians for Informed Consent (PIC) published in June 2020 an article "CoVID-19 Assessing Infection Severity" data from the CDC published in May 2020 showing the following:

- Mortality of SARS-CoV-2 based on *symptomatic* cases was 0.4%. Since 35% of cases were estimated by the CDC at the time to be asymptomatic, the *overall* CFR (case fatality rate) was 0.26%
- Comparison with CFR reports from seasonal influenza and influenza pandemics range from 0.1% to 2.25%. The latter figure was for the 1918-1920 pandemic, but the CFR for seasonal influenza in 1957-1960 was 0.28%, higher than the 0.26% for CoVID-19 reported by the CDC in May 2020.

This decrease in IFR was predictable to a certain degree, as initial figures for mortality were simple calculations based upon the number of deaths from CoVID divided by the number of cases diagnosed, with the latter number determined from testing among sick individuals only, and including those believed clinically to have CoVID-19 despite a negative PCR test. Once widespread testing became adopted, the denominator – total number believed to be infected – became rapidly larger. Some evidence has suggested furthermore that the virus has become relatively attenuated and less severe in its clinical impact – a development that would not be unusual for a pandemic virus.

It has become clear that IFR rates are far lower than initial projections and fears, which were derived from initial modeling data that proved to be orders of magnitude higher than reality. Even as this reality was recognized, the basis for mitigation practices shifted from using IFR rates and hospitalization numbers as the primary determinant to sole reliance

upon case number data. There is reason to believe this is the opposite of what should be done.

… then such school closings are unnecessary and counterproductive.

This current case number fixation has created a world where on a daily basis, the number of reported cases is featured in headlines all over the country in newspapers, on internet posts, and shared on social media. In one example, in early September, in the Greensboro, North Carolina newspaper, it was reported that a particular school where testing was done to monitor asymptomatic children, one child tested positive with the standard PCR based test procedure – and the school was immediately closed. If the number of "cases" is inaccurate and wildly inflated – for which we will see below there is compelling evidence – then such school closings are unnecessary and counterproductive. The same problem applies to other mitigation practices that are based exclusively upon case numbers.

It has been documented by Dr Scot Atlas, among others, that the number of deaths from *mitigation for CoVID-19* has now significantly exceeded that from CoVID-19 itself. This is attributed to increased rates of depression, suicide, drug overdoses, etc. Further data have shown that excess total mortality rates comparing current with past years' total mortality are not significantly higher than usual past rates. This of course begs another question far too involved to discuss here – the possibility that part of the perception of the impact of CoVID-19 is based upon shifting usual numbers of deaths from influenza that are peculiarly lower than usual to a diagnosis of CoVID-19. This in turn begs another question about the possible impact upon numbers of CoVID-19 deaths being inflated artificially because of the additional reimbursements to hospitals for CoVID-19 codes for hospitalizations and deaths. But even assuming that putative deaths from CoVId-19 are not artificially inflated, deaths from mitigation for CoVID-19 has exceeded those from CoVID itself.

Four recent sources delve into the PCR testing phenomenon in detail and together make a compelling argument that the standard form of diagnostic testing for CoVID-19 – PCR – is, just as its discoverer Kary Mullis argued prior to his death in 2019, grossly inaccurate and *should not be used for diagnosis*. Needless to say, this is a shocking suggestion, but I believe the evidence strongly supports this conclusion. Now we will discuss briefly the basics about PCR testing and show why it is imperative that ongoing public health mitigation measures shift from using PCR case numbers to accurate, non-inflated data from hospitalizations and deaths caused by CoVID-19 – at least until an accurate testing process can be established for determining infectious case numbers.

Four primary sources from which the following points are made:

1. Polymerase Chain Reaction (PCR) Test by Charles Patrick Davis, MD, PhD and Medical Editor Melissa Conrad Stoppler, MD Reviewed 6/22/20.
2. Your Coronavirus Test is Positive. Maybe It Shouldn't Be. The New York Times. Apoorva Mandavilli. August 29, 2020.
3. Dr Ben Edwards explains Covid-19 Pandemic is OVER. Why now only the CASEdemic exists 9/3/20.
4. Predicting Infectious Severe Acute Respiratory Syndrome Coronavirus 2 From Diagnostic Samples, Jared Bullard, Kerry Dust, et al. *Clinical Infectious Diseases*. 22 May 2020.

We will begin with an explanation of a complex subject – the rationale and scientific basis for the PCR technique, as applied to the prevailing diagnostic test being used in the United States, as well as most of the world. It is essential to understand in order to draw valid conclusions about the significance or lack thereof, of the CoVID-19 PCR test.

Basics of PCR

PCR is a chemical reaction to identify tiny bits of DNA, the primary form of material in human genes which in turn comprise chromosomes. Due to the infinitesimally small size of the particles, they must be amplified, or made exponentially larger in order to work with them. This amplification process is what Kary Mullis discovered, and consists of multiplying sequentially by doubling the material present. So, 2 becomes 4, then becomes 8, then 16, and so forth.

As noted, PCR multiplies DNA. The genetic material that comprises the virus for CoVID-19, as well as most other viruses, is RNA, an even smaller particle. It must be converted to DNA in order to utilize the PCR process. This is accomplished by action of an enzyme called reverse transcriptase (RT) in the first of four steps involved in the process. RT thus allows a single strand of RNA to be translated into a complementary strand of DNA. The product of RT acting on RNA is called RT-PCR.

… this simple decision to frame results of the PCR testing as the basis for the entire "case numbers" tracking upon which virtually all public health measures are being based is almost incomprehensible.

Another term is "Real-time PCR" – a variation of PCR that allows analysis of the amplified, or "multiplied" DNA during the typical number of 40 cycles. Fluorescent dye is added in some techniques to facilitate interpretation and obtain test results more rapidly.

The ultimate end-point of a PCR test is a result that is being arbitrarily defined as "positive" or "negative." The extraordinary implications of this simple decision to frame results of the PCR testing as the basis for the entire "case numbers" tracking upon which

virtually all public health measures are being based is almost incomprehensible. Dr. Michael Mina, assistant professor of epidemiology at the Harvard T. H. Chan School of Public Health is quoted in the New York Times article above as saying that this oversimplified interpretation of PCR as positive or negative is "irresponsible." This relates to the following discussion of the amplification process, sometimes also referred to as cycles. Dr. Mina is quoted in the Harvard Magazine (8/3/20) as saying that Current PCR testing detects virus "long after the infected person has stopped transmitting the virus." He further states "That means *the results are virtually useless for public health efforts to contain the raging epidemic*." (emphasis added)

PCR Amplification or Cycles

Most PCR tests are set to run at 40 cycles, a few at 37. North Carolina uses a cutoff of 37 cycles. This is important to remember as we develop the implications of this process. Tests with thresholds so high may detect not only live virus, but also simple genetic fragments, leftover from past infection that poses no risk for current exposure to others.

According to the NY Times article citing virologist Dr. Juliet Morrison, any test with a cycle threshold above 35 is too sensitive (in other words will read positive when the individual is not infectious). He recommends a more reasonable cutoff of 30 to 35 cycles. Dr. Mina would use a threshold of 30 or lower. A CDC calculation suggests that it would be extremely difficult to detect any live virus in a sample above 33 cycles. Another source suggested that if a threshold of over 40 cycles is used, *everyone tested* would be "positive."

An article published by The Infectious Diseases Society of America (IDSA) in their journal *Clinical Infectious Disease* (May 22, 2020) referenced in the 3rd source above, had the following to say:

> *Reverse-transcription polymerase chain reaction (RT-PCR) has become the primary method to diagnose viral diseases, including severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).*
>
> *We took SARS-CoV-2 RT-PCR-confirmed positive samples and determined their ability to infect Vero Cell lines. Ninety RT-PCR SARS-CoV-2-positive samples were incubated on Vero cells. Twenty-six samples (28.9%) demonstrated viral growth. There was no growth in samples with a CT > 24 or STT > 8 days.*
>
> *SARS-CoV-2 Vero cell infectivity was only observed for RT-PCR Ct < 24 and STT < 8 days. Infectivity of patients with Ct > 24 and duration of symptoms > 8 days may be low.*

It is important to know that IDSA is considered among many infectious disease specialists to be the highest authority from which they draw their information and from which they make their clinical decisions.

it would be quite easy and simple to manipulate the number of positive results with this form of testing …

Once one understands the basic flaws inherent in using PCR for diagnosis, it must be pointed out that in addition to the problems discussed above, with varying numbers of cycles or amplifications being used in different states or even in different health systems in one state, it would be quite easy and simple to manipulate the number of positive results with this form of testing by simply changing the number of cycles to a higher number to produce the appearance of worsening or to a lower one to produce lower infection numbers. Remember that some experts say that if over 40 amplifications be used, 100% of people tested would be positive. Because the diagnostic test that is the foundation of testing for CoVID-19 is a PCR test, an individual who gets tested in a facility or area that is using a test setting the cutoff at 37 cycles for example and has a positive result might fly to another area where repeat testing using a 30 cycle test would likely be negative. So, the same individual who "had CoVID-19" in location one does not have it after flying to the second location. This reveals the absurdity of the PCR based test.

Evidence that the CoVID-19 Pandemic is fundamentally over

Dr. Edwards goes through a number of slides showing how deaths and hospitalizations from CoVID-19 across the United States, as well as across other countries generally have declined to pre-pandemic levels. And yet, in the face of the documentation of deaths and other collateral damage from the *response to CoVID-19* exceeding those from the virus itself, these grossly misleading and inflated case numbers are the basis for most policy guidelines.

When one understands the clear and well documented fallacy of utilizing PCR based testing for diagnosis, it is inconceivable that policy makers continue to rely upon this technology, whose discoverer warned should not be done. Continuing to do this suggests an ulterior motivation to do so. Increasing numbers of people are awakening to the reality of this fallacious practice, as demonstrated by a recent mass demonstration in Berlin, Germany at which over one million individuals from all over Europe protested the continuation of extreme mitigation practices in these circumstances. Environmental attorney Robert F. Kennedy, Jr. was the keynote speaker at this event and has a number of outstanding articles available to the public on the website for Children's Health Defense.

For those who are skeptical that such a misleading practice might continue for non-medical or unscientific reasons, one only needs to consider that the market for a Coronavirus vaccine promises to be world-wide …

A good example of this inappropriate application of unnecessary mitigation is described in an Op-Ed by Daniel Horowitz on September 8, 2020. Horowitz cites a report by Dr. Andrew Bostom, a cardiovascular and epidemiology researcher, who posted a spreadsheet on Twitter of all the cases in 17 state university systems up to September 4, 2020. There were more than 11,000 students testing positive for CoVID-19 and deemed to represent "cases" – but *zero* hospitalizations. And yet schools and colleges are closing down left and right in response to such reports of clusters of "cases."

For those who are skeptical that such a misleading practice might continue for non-medical or unscientific reasons, one only needs to consider that the market for a Coronavirus vaccine promises to be world-wide, numbering in the billions, and probably for more than one dose, as well as needed for yearly administration. The same thing applies to a potential new drug for early treatment. It is relevant that a widely touted *early* combination treatment for CoVID-19 with zinc, azithromycin, and hydroxychloroquine has been widely discussed and promoted by front-line physicians who have reported remarkable success in reducing mortality rates and hospitalizations by 50 to 90 percent among sick CoVID-19 patients in many thousands of patients in over six countries and in the "hot zone" CoVID-19 area in New York City has been suppressed. This in the face of a number of controlled studies showing that such a combination *when used early* is safe, effective, and inexpensive. Studies cited by those imposing restrictions on this treatment were either designed to fail (treatment reserved for late in the clinical course or in one case using toxic doses of hydroxychloroquine) or contained fraudulent data and was retracted shortly after publication. The latter example was published in Lancet, one of the world's leading academic journals. Opposition even to allowing physicians to prescribe these two drugs widely used for decades for other indications, for CoVID-19 has been mostly political and has been exercised by governors, other non-physicians including pharmacy boards, etc.

It is past time to move away from reliance upon a flawed, highly misleading test for diagnosis upon which to base public policy recommendations and mandates. Public health policy guidelines and mandates based upon flawed data should be abandoned and centered around accurate data for hospitalizations and deaths from CoVID-19, carefully accounting for financially motivated up-coding in the process.

Once a more reliable diagnostic test that can produce results quickly is available, this can help to monitor societal penetration of the virus but should not be the basis for mitigation efforts when deaths and hospitalizations from CoVID-19 do not justify them.

****The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views of Children's Health Defense.*

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Republishing Guidelines

Misinterpreted *New York Times* report leads to false claim that the number of COVID-19 cases in the U.S. is inflated by up to 90%

CLAIM

COVID-19 case numbers are inflated due to PCR test sensitivity; “90% of positive COVID-19 tests should be negative”

VERDICT

FLAWED REASONING

DETAILS

Incorrect: Regardless of whether a person tested positive with a high or low viral load, a positive test indicates that the person is or has been infected with the virus, which qualifies them as a COVID-19 case. The high number of COVID-19 cases reported in the U.S. is due to a large number of infected people, not the PCR test's sensitivity.
Unsupported: The *New York Times* report did not provide any information regarding the frequency of symptoms among the people whose COVID-19 test results were examined. This makes it impossible to infer any association between the presence of symptoms and Ct values, which some videos and articles attempt to do.

KEY TAKE AWAY

It is important to distinguish between a person who has been infected and a person who is contagious. PCR tests with a high level of sensitivity can produce a positive result even though a person only harbors trace amounts of virus or even dead virus, like in recovering patients. Hence a positive test result without information about viral load is not of practical value in determining if an infected person should self-isolate and whether their contacts should be traced. Although a positive test may not tell us whether the person is contagious, it can confirm whether the person is infected. It is therefore appropriate to count a person with a positive result as a COVID-19 case.

FULL CLAIM: COVID-19 case numbers are inflated due to PCR test sensitivity; “90% of positive COVID-19 tests should be negative”; “In some states, their positive case rate could be exaggerated by 90 percent, according to the New York Times [...] This also means that we forced [...] people across the country, to self-isolate or quarantine who never had to, and that’s just because of false-positives due to bad testing”; “Up to 90% who’ve tested COVID-positive wrongly diagnosed”

REVIEW

The claim that the U.S. has an inflated COVID-19 case count due to the sensitivity of the diagnostic PCR test for the virus that causes COVID-19 has been published in several media outlets including One America News Network, The Blaze, Red State, and Townhall Media. The claim is a misinterpretation of a *New York Times* news report published on 29 August 2020, yet versions of the claim have received more than a million interactions on social media platforms like Facebook, according to the social media analytics tool CrowdTangle.

What the *New York Times* report said

In the *New York Times* article, several experts expressed concerns regarding whether PCR test results for the virus that causes COVID-19 are a practical way of informing an infected person what steps they should take after their diagnosis, specifically whether they are contagious and should self-isolate. This is also relevant to helping public health authorities determine whether contact tracing for that individual is needed.

The PCR test detects the presence of the virus by amplifying a small part of the virus’ genetic material. The number of amplification cycles needed to arrive at a threshold considered to be “positive” is also called the cycle threshold (Ct) value. The Ct value is dependent on the quantity of virus in a sample. The more virus present, the fewer amplification cycles are needed to reach the positive threshold, while a low viral load needs more amplification cycles to reach that threshold. As explained in the report, whether one has a high or low Ct determines whether contact tracing and self-isolation measures would be useful. Low viral load (high Ct value) very likely indicates low transmissibility. The video below, produced by Cold Spring Harbor Laboratory, provides a simple explanation of how the test works.

Michael Mina, an epidemiologist and assistant professor at the Harvard T.H. Chan School of Public Health explained in the article that relying solely on the PCR test to inform individuals of what steps they need to take next has turned out to be unreliable, because of the high number of infections in the U.S. and the amount of time the PCR test takes to return a result:

> “*People infected with the virus are most infectious from a day or two before symptoms appear till about five days after. But at the current testing rates, ‘you’re not going to be doing it frequently enough to have any chance of really capturing somebody in that window,’ Dr. Mina added.*
>
> *Highly sensitive PCR tests seemed like the best option for tracking the coronavirus at the start of the pandemic. But for the outbreaks raging now, he said, what’s needed are coronavirus tests that are fast, cheap and abundant enough to frequently test everyone who needs it — even if the tests are less sensitive.*”

A positive PCR test result confirms an infection but not contagiousness; people in the earliest stages of infection and those who are recovering tend to have a low viral load and are not very contagious, but they can still test positive

The videos and articles making this claim focus on a specific passage in the original report:

> "*This number of amplification cycles needed to find the virus, called the cycle threshold, is never included in the results sent to doctors and coronavirus patients, although it could tell them how infectious the patients are.*
>
> *In three sets of testing data that include cycle thresholds, compiled by officials in Massachusetts, New York and Nevada, up to 90 percent of people testing positive carried barely any virus, a review by The Times found.*"

Ct values relate to the test sensitivity, but the videos and articles draw inaccurate conclusions from the *New York Times* report by claiming that the test sensitivity is responsible for inflating the number of COVID-19 cases reported in the U.S. The U.S. currently has the highest number of cases in the world. Based on this flawed conclusion, the videos and articles claim that measures like physical distancing and lockdowns are therefore unnecessary.

This is a strawman argument, as it fails to distinguish between the test's ability to confirm *an infection*—which is what case numbers measure—with the test's ability to determine *contagiousness*, which is the key issue that the *New York Times* article deals with. The two categories are distinct. For instance, recovering (convalescent) COVID-19 patients can still test positive for a certain period of time, as documented by South Korea's Center for Disease Control. This is because the PCR test cannot distinguish between live and dead (non-infectious) virus. This statement in the *New York Times* article is also a reference to recovering patients: "Tests with thresholds so high may detect not just live virus but also genetic fragments, leftovers from infection that pose no particular risk."

On the flip side, the *New York Times* article points out that low viral loads can also occur in people during early stages of infection with this statement: "The F.D.A. noted that people may have a low viral load when they are newly infected. A test with less sensitivity would miss these infections." But these people could become infectious later when viral load increases as the infection progresses.

Some outlets have even called these high Ct positive results "false positives", which is inaccurate. The term "false positive" indicates that a person tested positive but does not have the disease[1]. However, the *New York Times* report makes it clear that a person is or has been infected if they test positive, regardless of whether the test had a high or low Ct value. This also means that it is appropriate to consider a person with a positive result and high Ct value as a COVID-19 case.

Therefore, the sensitivity of the PCR test is not responsible for the high number of cases in the U.S. Simply put, case numbers are high because there are many infected people. This indicates a high level of virus transmission in the community and public health measures, such as physical distancing and lockdowns, are effective and important for reducing the number of infections and protecting the community[2,3].

Apoorva Mandavilli, the journalist who wrote the *New York Times* article, also stressed this point in a Twitter thread, clarifying that "people who test positive but with high CTs *were* contagious, just at an earlier time point. They are not contagious *anymore*. Doesn't mean they were never infected, so doesn't affect the case count."

High Ct values do not mean that someone is asymptomatic

Some of these videos and articles make a leap of logic by claiming that the individuals who had tested positive at a high Ct value (i.e., low viral load) were people who showed no symptoms. This interpretation is baseless and unsupported by the *New York Times* report, which provided no

information regarding the frequency of symptoms among the people whose COVID-19 test results were examined. This makes it impossible to infer any association between the presence of symptoms and Ct values.

And based on this faulty assumption, the videos and articles also claim that the findings in the report mean that people without symptoms—which they label as asymptomatic cases, wrongly, as we explain later—do not spread the virus. This claim is inaccurate on two counts. Firstly, people without symptoms contribute to significant transmission of the virus, as this Health Feedback review reported. The U.S. Centers for Disease Control and Prevention has estimated that about 50% of COVID-19 transmissionoccurs before the onset of symptoms. Furthermore, studies have shown that infected individuals who do not show symptoms shed infectious virus[4-6].

Secondly, this interpretation relies on the wrong definition of asymptomatic individuals. The WHO terminology and the medical definition, as reported here, reserves the term for a person infected with COVID-19 who does not and will not develop symptoms. True asymptomatic cases are uncommon compared to pre-symptomatic cases, in which a person does not show symptoms initially but goes on to develop symptoms later during the infection.

Conclusion

In summary, the claim that the COVID-19 case counts in the U.S. are inflated because of the PCR test's sensitivity is based on an inaccurate and misleading interpretation of the original *New York Times* report. The report details concerns about whether PCR test results are of practical use in determining if a person is contagious, which has implications for the necessity of contact tracing and self-isolation. It also notes a potentially large proportion of positive results from people with low viral loads who are unlikely to be contagious.

But the report is NOT saying that people with positive test results and high Ct values were wrongly diagnosed as a COVID-19 case. Regardless of whether the Ct value is high or low, a positive test indicates that the person is or has been infected with the virus, which qualifies them as a COVID-19 case.

In short, the high number of COVID-19 cases observed in the U.S. is due to a high number of infected people in the community, not the PCR test's sensitivity. Hence public health measures, such as physical distancing and lockdowns, are important for reducing the rate of infection in the community. Given testing bottlenecks in the U.S., the number of COVID-19 cases is much more likely to be underestimated, rather than overestimated as these videos and articles claim.

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NOTES

This fact check is available at IFCN's 2020 US Elections FactChat #Chatbot on WhatsApp. Click here, for more.

Coronavirus COVID-19 PCR

Published on: 10 Sep 2020 | Editor: Flora Teoh

Health Feedback is a non-partisan, non-profit organization dedicated to science education. Our reviews are crowdsourced directly from a community of scientists with relevant expertise. We strive to explain whether and why information is or is not consistent with the science and to help readers know which news to trust.
Please get in touch if you have any comment or think there is an important claim or article that would need to be reviewed.

Ruth Bader Ginsburg (September 20, 2020)

Original CHD Article:

https://childrenshealthdefense.org/news/r-i-p-rbg-medical-freedom-and-environmental-champion/

USA Today Fact Check Article:

https://www.usatoday.com/story/news/factcheck/2020/09/27/fact-check-ruth-bader-ginsburg-not-medical-freedom-champion/3505253001/

September 22, 2020

R.I.P. RBG — Medical Freedom and Environmental Champion

By

Robert F. Kennedy, Jr.

Ruth Bader Ginsburg's death robs vaccine safety advocates of one of their SCOTUS champions. The other is Sonia Sotomayor. In 2015, RBG joined Sotomayor in a withering dissent of Judge Scalia's historic decision in Bruesewitz v. Wyeth. Scalia and his corporatist brethren interpreted the National Childhood Vaccine Injury Act of 1986 (NCVIA) to shield Big Pharma with full immunity from liability for vaccine injuries. Their decision removed all incentives for pharmaceutical corporations to make vaccines safe, and Americans forfeited their seventh amendment right to jury trial against vaccine companies that harmed them, no matter how negligent.

RBG and Sotomayor said that Scalia's opinion caused "considerable violence to the statutory texts, misconstrued the legislative history and draws all the wrong conclusions" from NCVIA.

Congress, the lady justices observed, intended to exempt vaccine manufacturers from tort liability "only upon a showing by the manufacturer in each case that the vaccine was properly manufactured and labeled, and that the side effects stemming from the vaccine's design could not have been prevented by a feasible alternative design that would have eliminated the adverse side effects.…"

They pointed out that tort suits, including discovery, were the only force incentivizing drug companies to make vaccines safe. They said, "Tort suits uncover unknown drug hazards and provide incentives for drug manufacturers to disclose safety risks promptly."

By construing the Vaccine Injury Compensation Act to pre-empt all design defect claims, "the majority's decision leaves a regulatory vacuum in which no one — neither the FDA nor any other federal agency, nor state and federal juries" ensures vaccine safety. "There is no reason" they added "to think that Congress intended in the vaccine context to eliminate the traditional incentive and deterrence functions served by … tort liability…. Nothing in the text, structure, or legislative history remotely suggests that Congress intended that result."

Scalia's decision made vaccines immensely profitable and gave blanket immunity to the 72 mandated doses of unnecessary, untested, risky, zero liability vaccines now on the

mandatory schedule.

Justice Ginsburg was a champion for safe vaccines, and, or course, for women's rights, and gender equality, but she was also an environmental crusader.

Ginsburg consistently voted in favor of saving the Clean Water Act from industry efforts to weaken and restrict its reach.

In 2001, she joined a scathing dissent in *Solid Waste Agency of Northern Cook County v. United States,* in which the majority ruled that isolated ponds and wetlands are beyond federal jurisdiction. In 2006, the court's splintered 4-1-4 decision *Rapanos v. United States*, Ginsburg joined justice John Paul Stevens in arguing for expansive federal jurisdiction over virtually all waterways.

In April, she was part of a six-justice majority that ruled pollution that travels into waterways via groundwater can be subject to the Clean Water Act.

Ginsburg was the supreme court's leading warrior in defending government's authority to protect our climate.

In 2001, she joined a unanimous court in ruling that the U.S. Environmental Protection Agency (EPA) cannot consider implementation costs when setting national air quality limits for smog and other toxic pollutants. It is one of the high court's most important environmental rulings, and those EPA regulations particularly have improved millions of lives.

Ginsberg also took the lead on defending the government's power to regulate air pollution and climate altering chemicals.

Six years ago, Ginsburg led a 6-2 majority that upheld an Obama rule limiting air pollution that crosses state lines, preserving the rule that shuttered some of the nation's dirtiest power plants.

Ginsburg was part of the five-justice majority in the high court's landmark ruling on climate change, 2007's *Massachusetts v. EPA*, holding that the Clean Air Act gave EPA the authority to regulate greenhouse gases from cars and trucks.

In 2011, Ginsburg authored a unanimous ruling, *American Electric Power v. Connecticut*, affirming EPA's power to regulate greenhouse gases from power plants.

Justice Ginsberg's death is a loss for every American who believes that we have a moral obligation to give our children the same opportunities for clean water, clean air, an abundant, wholesome, environment, and good health that our parents provided us.

Sign up for free news and updates from Robert F. Kennedy, Jr. and the Children's Health Defense. CHD is planning many strategies, including legal, in an effort to defend the health of our children and obtain justice for those already injured. Your support is essential to CHD's successful mission.

Republishing Guidelines

Fact check: Justice Ruth Bader Ginsburg's dissent in pharmaceutical case wasn't anti-vaccine

Ella Lee USA TODAY
Published 6:55 p.m. ET Sep. 27, 2020. Updated 7:00 p.m. ET Sep. 27, 2020

The claim: Ruth Bader Ginsburg was a 'medical freedom champion'

In the wake of Supreme Court Justice Ruth Bader Ginsburg's death, people have taken to social media to honor her legacy. An Instagram tribute by Robert F. Kennedy Jr., a prominent anti-vaccination activist, claims that Ginsburg voted in support of medical freedom.

Kennedy's caption on the Instagram post — a picture of Ginsburg under the text "R.I.P. R.B.G: Medical Freedom Champion" — pointed to a case in which the justice dissented as evidence in support of the claim.

"Ruth Bader Ginsburg's death robs vaccine safety advocates of one of their SCOTUS champions," the post reads. "The other is Sonia Sotomayor. In 2015, RBG joined Sotomayor in a withering dissent of Judge Scalia's historic decision in Bruesewitz v. Wyeth. Scalia and his corporatist brethren interpreted the 1986 Vaccine Act (VICA) to shield Pharma with full immunity from liability for vaccine injuries."

He added that the court's decision "removed all incentives" for pharmaceutical corporations to make vaccines safe.

In response to USA TODAY's request for comment, Kennedy sent USA TODAY the opinions of the court in the case, via his executive assistant, Lauren Gerrish.

Fact check: It's true, Ginsburg and Scalia were close friends despite ideological differences

Bruesewitz v. Wyeth

After Hannah Bruesewitz was vaccinated for diphtheria, tetanus and pertussis in 1992, she was hospitalized for weeks with seizures, according to Oyez, a law project from Cornell's

Legal Information Institute. Her parents filed a petition seeking compensation for her injuries, which was denied; they later filed a lawsuit against the drug company, Wyeth.

The lawsuit, filed in Pennsylvania state court, was dismissed after a federal judge ruled the National Childhood Vaccine Injury Act protected Wyeth from lawsuits claiming vaccine injury. That was affirmed by /the Third Circuit Court of Appeals the U.S. Court of Appeals for the 3rd Circuit before it went to the Supreme Court.

But the question before the high court was not whether the vaccine hurt Bruesewitz; it was whether the federal law already in place could shield vaccine manufacturers from some liability lawsuits in state court seeking damages for vaccine injury.

“It’s a very practical question: Should we have state courts contemplate cases in addition to federal agencies?” said Dorit Reiss, a law professor at University of California-Hastings whose research focuses on vaccine law. “In part, it depends on how much you trust state courts; in part, it depends how much you trust the federal agency, but it has nothing to do with medical freedom.”

The majority affirmed the lower court’s decision that design defects were preempted, reasoning that Congress set up the Court of Federal Claims — as Justice Antonin Scalia called it in the majority opinion, “Vaccine Court” — to provide compensation to children injured by vaccines without also driving drug manufacturers away from the vaccine market.

Justice Sonia Sotomayor wrote a dissenting opinion, which argued the court should inquire whether "a feasible alternative design existed that would have eliminated the adverse side effects of the vaccine without compromising its cost and utility.” If the vaccine company could have, then it might still be liable. Ginsburg joined that dissent.

“It's a really, really nit-picky textual argument over this language in the statute,” said Anna Kirkland, author of "Vaccine Court."

Fact check: Satirical claim that the 9th Circuit Court of Appeals overturned Ginsburg's death

The case’s implications

To say Ginsburg was a supporter of — much less a “champion” of — medical freedom is misleading.

The term “medical freedom” is often a “code word” for the anti-vaccination movement, Kirkland said.

“Of course they’re for vaccine safety; nobody’s against vaccine safety,” she said. “The majority says, ‘Look, we have all these things in place for vaccine safety and this is what Congress needs to do. And it’s perfectly capable of doing that.’ And (Sotomayor and Ginsburg) say, ‘Well, no, actually we read the language the other way, and there’s a small loophole that we think would be fine and promote safety better.'

“There's no indication whatsoever that Ginsburg would have gotten on this so-called ‘medical freedom’ bandwagon, which has just these really bizarre and unreasonable claims,” Kirkland added.

Reiss said that Ginsburg’s position in this case is in line with her views on preemption in other cases, like Riegel v. Medtronic, Inc.

Both Reiss and Kirkland objected to Kennedy’s implication that the majority’s decision “removed all incentives” to make vaccines safe.

“I think for companies who invest hundreds of billions of dollars in testing a vaccine, the fear of having it taken off the market is a big incentive to keep it safe,” Reiss said.

Kirkland added that there’s still a large regulatory scheme intended to ensure vaccines are safe.

The companies “have plenty of incentive through the regulatory scheme and through fear of scandal and reprisals,” she said. “So frequently the anti-vaccine activists act as if the whole regulatory field doesn't do anything.”

Fact check: 'Kingdom of God' comment by SCOTUS nominee Amy Coney Barrett lacks context in meme

Undercurrents of the decision

Still, while “full immunity” is not a legal term, Kirkland said that’s an accurate characterization of the protection the pharmaceutical industry now has from vaccine injury liability.

“It is a quite robust preemption of lawsuits,” she said. “The whole game that the anti-vaxxers actually cared about was taken off the table fully.”

The game Kirkland is referring to is the common anti-vaccine argument that vaccines can cause autism. The Institute of Medicine, an impartial group that advises Congress on science issues, determined that evidence did not show a link between vaccines and autism.

“(Anti-vaccination activists) wanted to be able to get an avenue back into court and to get a jury to weigh in on that instead of experts,” Kirkland said.

She said those experts urged the court to come down on the majority side, looking at the Omnibus Autism Proceeding.

“They’re all saying, you know, ‘Don’t open this bottle,’” Kirkland said.

The justices resolved the case based on the text of the National Childhood Vaccine Injury Act.

“This is just a very arcane case; it's not ideological, so much,” Kirkland said. “It was, you know, about all these under-current politics that were happening, and I don't have any indication that the justices did necessarily know. They certainly didn't let on, and they keep it all in this very textual, text-based argument.”

To say it was a case about medical freedom, or even vaccine safety, is false, both experts concluded.

“This isn’t medical choice at all, and it can’t be considered an anti-vaccine decision,” Reiss said. “You can say Justice Ginsburg was about making it easy for people to be compensated for injuries related to a medical product, not just vaccines.”

Fact check: No guarantee Obama would've replaced Ginsburg with a progressive justice

Our rating: Missing context

The case Robert F. Kennedy Jr. cites as a reason Ruth Bader Ginsburg was a "medical freedom activist" was not about medical freedom. The case did not remove "all incentives" to keep vaccines safe, however, the decision did protect pharmaceutical companies from vaccine injury liability. Ginsburg's dissent was related in a broader sense to medical products, not just vaccines. We rate this claim MISSING CONTEXT, because it could be misleading.

Our fact-check sources:

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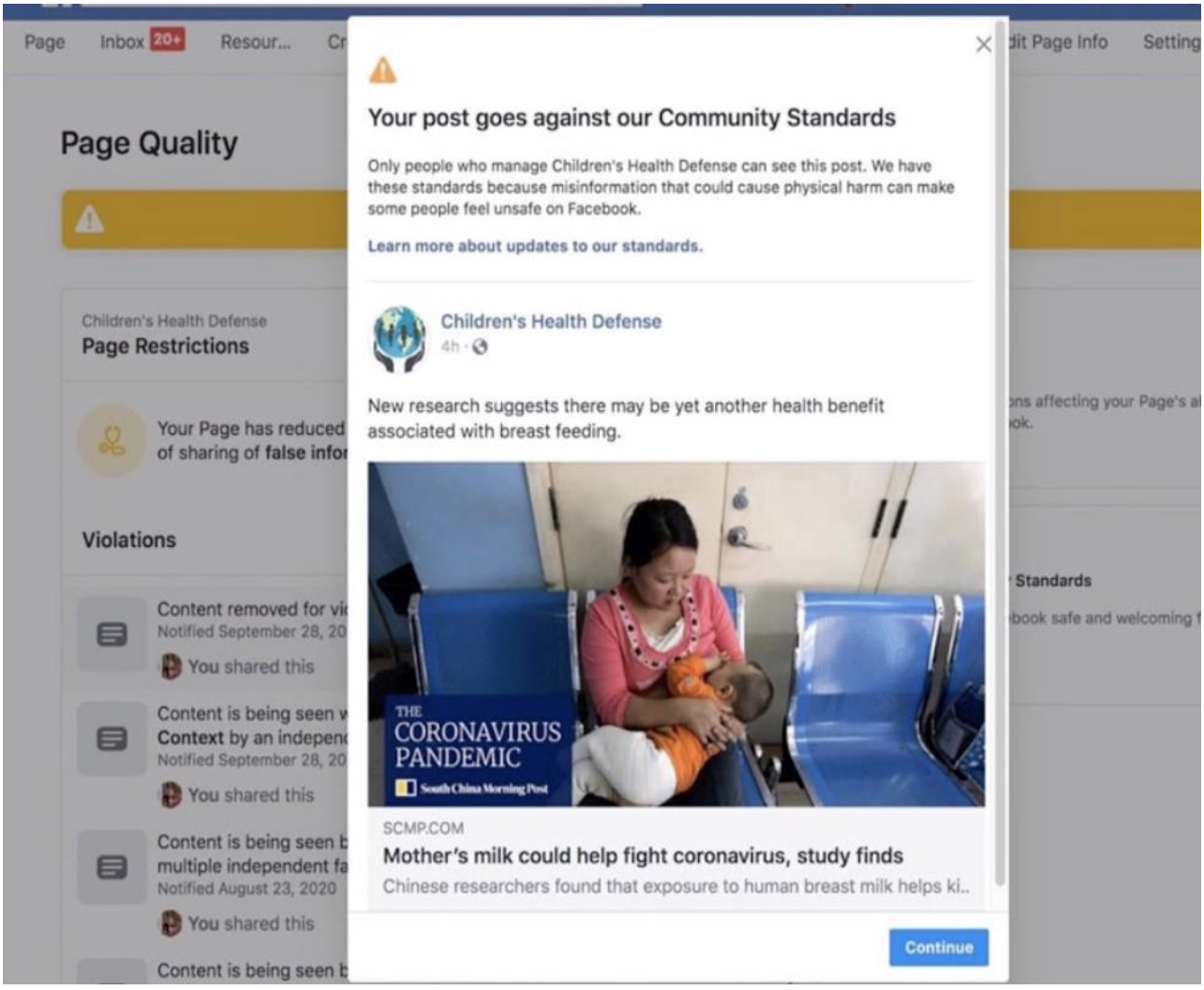
Breastfeeding (September 28, 2020)

Article linked in CHD post:

https://www.scmp.com/news/china/science/article/3103248/mothers-milk-could-help-fight-coronavirus-study-finds

Facebook Response:

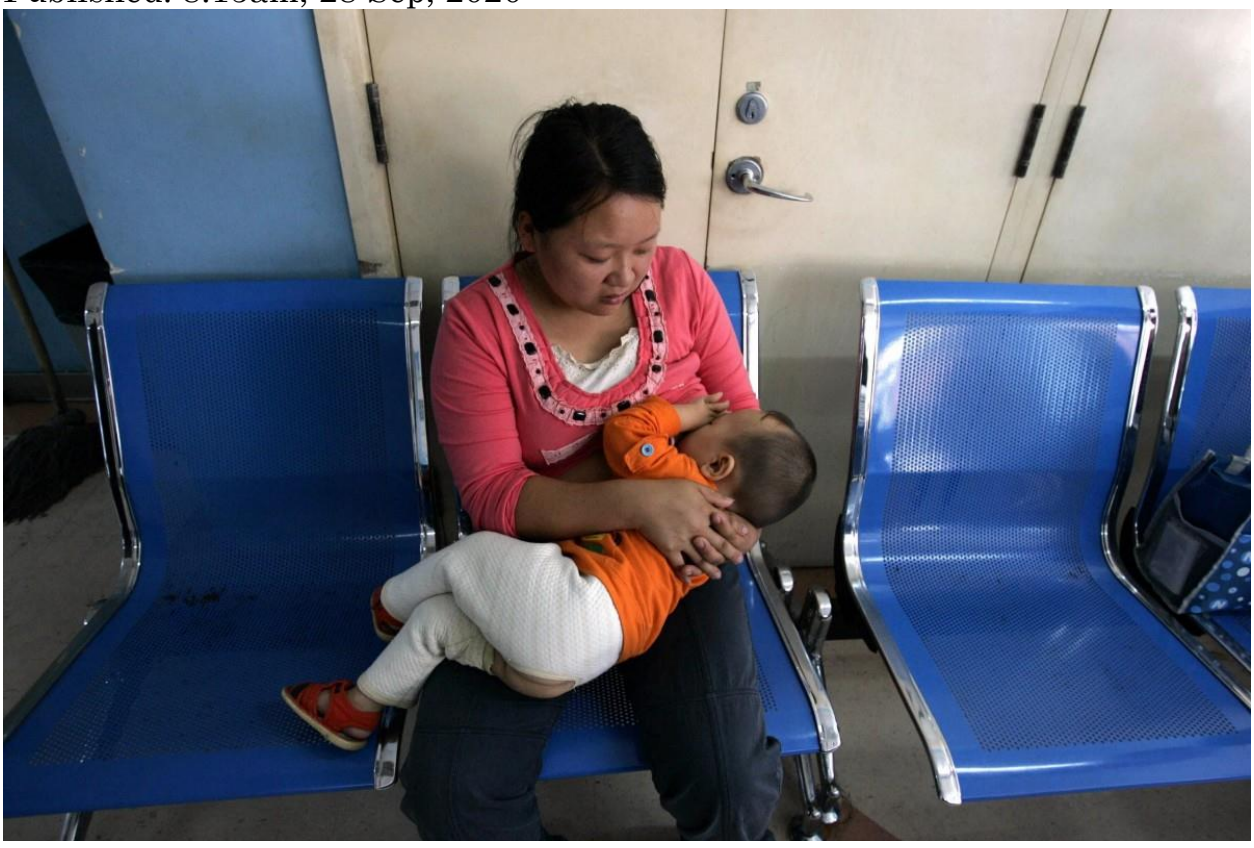


China / Science

Mother's milk could help fight coronavirus, study finds

- Chinese researchers found that exposure to human breast milk helps kill the virus that causes Covid-19
- Some health authorities have warned that breastfeeding could spread the virus, although the World Health Organization says mothers should continue to do so

Stephen Chen in Beijing
Published: 8:15am, 28 Sep, 2020



The study found that breast milk killed off most viral strains. Photo: AP

Mother's milk could prevent or treat Covid-19, according to a new study by Chinese scientists.

A research team in Beijing tested the effect of human breast milk on cells exposed to the Sars-CoV-2 virus. The milk was collected in 2017, well before the start of the pandemic, and the cell types tested varied from animal kidney cells to young human lung and gut cells.

The results were the same: most living virus strains were killed by the milk.

The breast milk was "blocking viral attachment, entry and even post-entry viral replication," the team led by Professor Tong Yigang from the Beijing University of Chemical Technology wrote in two non-peer-reviewed papers posted on biorxiv.org on Friday.

Breastfeeding has previously been seen as increasing the risk of viral transmission.

In Wuhan, where the virus was first detected, newborns were separated from mothers who tested positive and fed exclusively by formula, according to Chinese media reports from February.

The US Centres for Disease Control also warn that babies being breastfed by mothers suspected or confirmed to be carrying Covid-19 should be seen as "suspect" carriers too.

But the latest study supports the World Health Organization's official stance that mothers should continue to breastfeed even if they have Covid-19.

The global health body tracked 46 Covid-19 breastfeeding their children in several countries through June.

Viral genes were detected in the milk of three mothers but there was no evidence of infection. Only one child tested positive and transmission through other means could not be ruled out.

Tong and colleagues mixed some healthy cells in human breast milk, then washed the milk off and exposed the cells to the virus.

They observed there was almost no viral binding or entry to these cells, and the treatment also halted viral replication in cells already infected.

They concluded that the infection could be inhibited by breast milk, which is already known to have suppressive effects on bacteria and viruses such as HIV.

Tong and colleagues suspected the coronavirus was sensitive to some well known antiviral proteins in milk, such as lactoferrin, but found none of the proteins worked as expected.

Instead, they said the most like ingredient for inhibiting the virus was whey, which contains several different proteins.

Cow and goat whey, was able to suppress the living viral strains by about 70 per cent, according to Tong's study. In comparison, the efficacy of human whey reached nearly 100 per cent.

Human milk was able to eliminate the virus in a broader range of cell types, but the researchers said it was unclear what had caused the difference.

Tong and colleagues said they had not found any sign of harm caused by human milk, which "promoted cell proliferation" while killing the virus.

Some parents are know to use donated breast milk to feed their babies, which is often pasteurised to eliminate potential contamination.

However, the Chinese team found that heating the milk to 90 degrees for 10 minutes inactivates the whey protein, causing the protection rate against the coronavirus would drop to under 20 per cent.

"It is worth identifying the key factors for further antiviral drug development," they concluded.

CONVERSATIONS **(3)**

Stephen Chen

Stephen Chen investigates major research projects in China, a new power house of scientific and technological innovation. He has worked for the Post since 2006. He is an alumnus of Shantou University, the Hong Kong

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